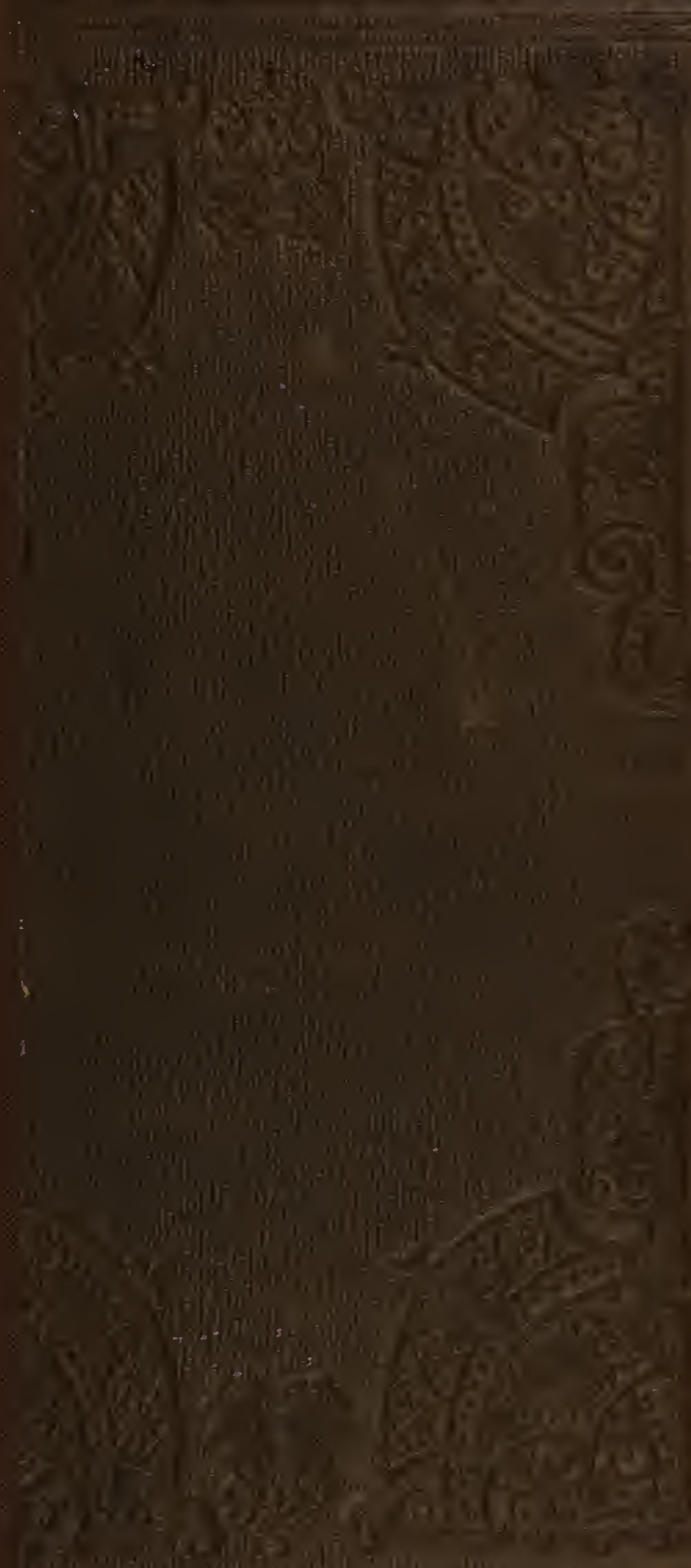
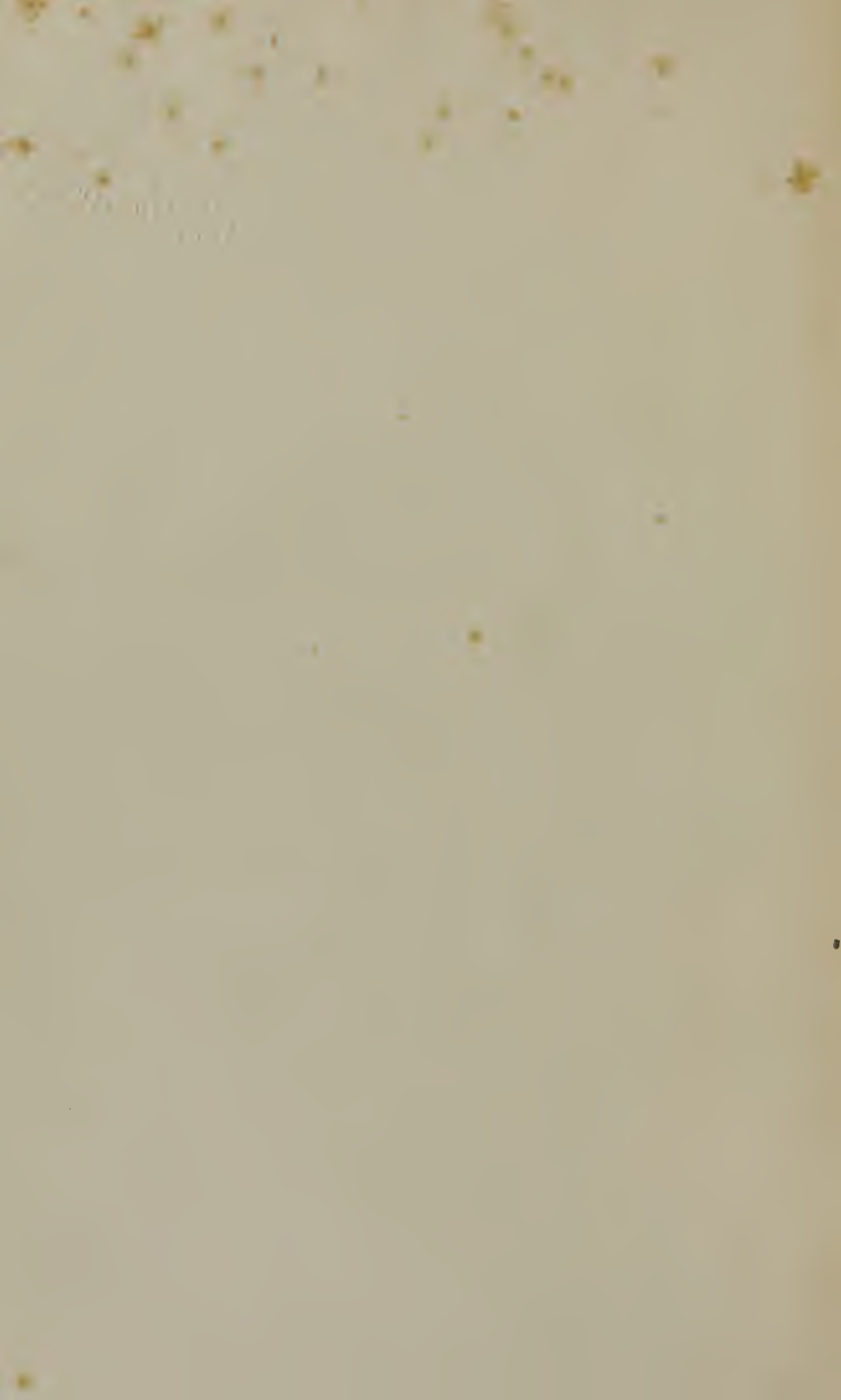


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DISEASES

OF THE

GENITO-URINARY ORGANS.

BY

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INTRODUCTION.

I HAVE been so often solicited to publish the results of my experience in diseases of the Genito-urinary Organs, that I have concluded to put forth this little volume, as a beginning; simply detailing a few of the facts that have come under my observation, and the inferences that I have thought could be rationally drawn from them.

There are many other diseases that I might have included in this volume, particularly syphilis, as it is a subject that has long engaged my attention, and I had collected a great many cases, with drawings, by which I hoped to show that the various forms which this disease assumes, are the result of peculiarities of constitution; but some of my best drawings have been lost. It would have been well, if I had the time, (which I have not,) to have given the opinions and practice of other surgeons on these subjects; but this was not my object: I merely wished to state what I have found to be true, so that those practitioners who have not had opportunities of experience, may have

an easy reference. Another reason that would deter me from entering into the discussion of the various diseases of these organs is, that it has already been very ably done by Prof. GROSS, who has published, in a systematic and connected form, a full and comprehensive account of the diseases of the bladder, which does him great credit, and he has thus filled a void, the existence of which I, among others, had long regretted.

I have not written this book either for profit or reputation, as I have lived long enough to know that they are both "bubbles," but mainly, for reasons before stated, and also, so far as I can, to exemplify the truth of that great idea of ABERNETHY, "*that local disease is dependent on constitutional irritation.*"

A. G.

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GONORRHOEA.

THE question has often been asked : "What is Gonorrhœa ? Is it a disease that arises from contact with a specific virus, as in Syphilis, Small-pox, &c. ; or, is it a simple inflammation of the mucus membrane of the urethra, arising from contact with ichorous or irritating matter coming from the vagina or uterus, the result of deranged or vitiated secretion or excretion ?" Our answer to this question is, that a disease does sometimes arise (having all the characteristics of Gonorrhœa), from coition with females, where there is no ground for suspicion, and where, upon examination of the vagina, you cannot discover any symptoms of the disease. On the other side, it may be said that if this disease can be contracted from causes not specific in their character, why is it not more common in married persons?—for a vast number of all classes of females are subject to morbid secretions in the vagina. The force of this argument I cannot deny. Yet I must say, (and I would not say it, if long experience did not justify me,) that a man should not be convicted of infidelity to his wife from the simple circumstance of having a muco-purulent discharge from the urethra. I have, therefore, been in the habit of treating this malady as a

LOCAL DISEASE.

It has been argued with some plausibility that patients having Gonorrhœa are often attacked, during its progress,

with inflammation of the joints, and what is called Gonorrhœal Ophthalmia: but, after observing many cases of this kind, I have come to the conclusion that these swellings of the joints and affections of the eye occur in persons who are constitutionally or incidentally pre-disposed to Rheumatism. In this view, I find, I am sustained by a gentleman of large experience in these diseases—Mr. Lawrence, formerly of St. Bartholomew's, London, who says: "It has appeared to us that the tendency to Gonorrhœal Ophthalmia, as well as Gonorrhœal Rheumatism, prevails in certain families. We are in the habit of attending two brothers, each of whom has had these two diseases, separately and conjointly, several times. It has also appeared to us that persons, prone to Rheumatism, independently of Gonorrhœa, are more prone to Rheumatism with Gonorrhœa than others are."

It may be asked, how is the disease transmitted from the mucus membrane of the urethra to the eye and to the synovial membrane of the joints? That can only be accounted for upon the principle that certain diseases are prone to pervade certain analogous tissues.

SYMPTOMS.

There is only one constant symptom in Gonorrhœa, and that is a discharge of muco-purulent matter. The next most common symptom is, more or less, pain in urinating, which is often attended with soreness of the urethra, chordee, sometimes inflammation and swelling of the penis, with constant desire to urinate—all these symptoms varying, according to the constitution and condition of the patient. When the inflammation extends to the bladder, there is pain over the pubis, with increased frequency of the desire to urinate. Swelling of the testicle is also a common occurrence, and is generally

supposed to arise from the disease extending along the seminal ducts. Hence, we find, the epididimus becomes affected first, and as the disease is mostly confined to that organ, it is generally called Epididimitis. In fact, the great variety of symptoms and forms that Gonorrhœa assumes, according to the condition, or constitution, of the patient, has been offered as an argument against the specific character of the disease. I think we may almost say that there would be no disease, if there was no imperfect development, no mal-formation, no vitiation in the secretions and the excretions. Persons have frequently called on me for treatment who have expressed great surprise that they should have contracted the disease, for, say they, we have been in the habit of cohabiting promiscuously, for many years, and frequently with those from whom others have contracted disease, yet, until now, we have always escaped.

Three students, on the evening of their arrival in the city, had connection with the same female. One contracted Syphilis, with a Hunterian chancre; one contracted Gonorrhœa; the other escaped all disease. To show with what facility some constitutions throw off disease, I know a person who has had chancres twenty times; he never would use any other remedy than a simple wash of nitrate of silver, which generally healed the sore in a few days; he has escaped all constitutional symptoms; he has reformed his habits, and is now a very healthy man, sixty-five years of age. Yet how much misery, sickness, and death has one chancre caused in generations of families! Health and beauty is the result of perfect development; sickness, and deformity, and early death, of imperfect development and vitiation. The nearer the approach to healthy action, the less liability to disease. How many of us have traversed hospitals for months, where the atmosphere was loaded with the seeds of

disease, and have escaped ; but sometimes one of us, who has the soil in which the seed will grow, becomes a victim.

For the purpose of explaining my views of the

PATHOLOGY AND TREATMENT

Of the disease called Gonorrhœa, it will be necessary to give cases, showing the various forms the disease assumes, and the particular treatment that is adapted to these varieties.

First, we will endeavor to describe the disease, as it often occurs in well-developed individuals, whose general health is unimpaired.

A man, aged thirty-six, with a well-formed, broad chest, limbs tapering, small extremities, tongue clean, bowels regular, habits temperate, called on me, with a yellow and free discharge from the urethra, with some pain in urinating : he had first discovered it the day before, three days after cohabiting.

Injected his urethra with a solution of nitrate of silver, thirty grains to the ounce of water, directed him to eat but little, drink freely of parsley-root tea, and take a gentle cathartic at bed-time. The next day he informed me that the injection had been painful ; the discharge had been very free, somewhat bloody. His medicine operated, but now he had very little discharge. Injected a little cold water next day, he was well, and continued so.

I could give a great many such cases as this to illustrate the idea that I wish to inculcate, which is, that when the general health of the patient is good, the secretions and excretions unimpaired, nature requires but little aid to enable her to throw off the disease. In order to change the local action, use the injection of nitrate of silver, pretty strong. All we know of this remedy is, that it seems to set up a new action in the part, that nature can overcome more easily than

the original action ; it is called an alterative ; like most other medicine, we use it empirically, and experience has taught us its value. Then, for the purpose of diluting the urine, and rendering it less irritating, we give such remedies as increase it in quantity, for urine is always irritating to diseased surfaces ; and for this purpose I have used for many years the parsley-root tea, and frequently old patients tell me that that they have relieved themselves with the use of cold-water injections and this tea only ; but this is always a dangerous confidence, and no one can tell what character the disease will assume, for it often happens that cases that promise easy cure, are very protracted and difficult to manage, as the following case will show :

A gentleman, well formed, whose habits were not intemperate, whose occupation required him to walk a great deal ; his tongue was slightly furred, his general health was apparently good, he had contracted Gonorrhœa about four months before he came to me, and had treated himself, as he had often done before, with injections and balsam copaiba. The discharge was not very copious, nor high-colored. I treated him with injections and alterative cathartics, and diluent drinks, but he was not relieved. Upon examining the stream, I found it rather small. I found, too, that he was somewhat troubled with hæmorrhoids. By the introduction of the large bougie with cold-water enema every day, he got well, but the case was very protracted. Now, in this case, for the want of adapting the remedies to the case, it continued until the disease extended along the whole of the urethra, the mucus membrane had become indurated—a state of things I often find in protracted cases ; hence the necessity of dilating the urethra, to stimulate the absorbents to take up their depositions of coagulable lymph.

It is sometimes the case, when persons are troubled with

hæmorrhoids, there seems to be some connection between this affection and the running from the urethra, and I have found that cold-water injections, taken at the time of the fœcal discharge, with astringents applied to the part, have very much aided me in the cure of Gonorrhœa.

Another kind of case frequently occurs, where persons have contracted disease in miasmatic regions, and it is apparently kept up by a vitiated condition of the system.

A man, about forty years of age, well formed, was born at the North, but had been living in an unhealthy region at the South, where he had several attacks of intermittent fever. He had contracted Gonorrhœa about a year before he called on me; his tongue was furred, his skin yellow, his bowels irregular; the discharge was pretty copious; it had, once or twice, nearly ceased; he had used all the usual remedies; latterly he had been drinking gin, having been told that it was good for the disease.

Ordered him to take proto-chlo. mer. and jalap, each ten grains; to drink freely of parsley-root tea; avoid all stimulating drinks. The next day he had several copious bilious evacuations.

Injected into the urethra a strong solution of nitrate of silver; directed him to take sarsaparilla and Fowler's solution of arsenic; continued weak injections; used gentle cathartics to keep the bowels regular, with the continued use of the diluents, and in about two weeks the skin began to get clear, the general health to improve, and the discharge soon ceased.

Now, here is a case of what we call biliary derangement, with a pre-disposition to intermittent fever, which prevented the system from throwing off the disease, and the indications were, to remove this derangement of the general system, and to allow healthy action to be restored.

A different state of things may be illustrated by the following case :

A man, about thirty-five, from a country town, called on me, who had been troubled with Gonorrhœa for more than twelve months. He had tried Homœopathy, Hydropathy, and Allopathy : still the discharge continued, and never ceased more than a day at a time. He was a very tall man, and very well developed ; he had lived very abstemiously ; his general health had not suffered much ; he had been troubled in the early part of the disease with the swelled testicle, which had confined him to his bed about a month ; his tongue was furred and white ; the bowels irregular, the discharge was light-colored ; he had sometimes suffered pain after urinating ; the epididymus was still a little indurated.

Ordered a mercurial cathartic, combined with quinine, two grains ; parsley-root tea as constant drink. The next day used an injection of strong nitrate of silver with a long tube, so as to reach the neck of the bladder. A considerable discharge of yellow matter followed this injection ; continued the injections, but much weakened. I then ordered him to take cold-water enemas, sarsaparilla, with generous diet ; and after a few weeks the discharge ceased.

The peculiarities about this case are, that he had suffered from swelled testicle, and that the disease had lingered about the neck of the bladder ; his system was considerably run down. It was necessary to apply an active remedy directly to the part, as well as to improve the general health, by alteratives and generous diet.

We have cases, sometimes, in which derangements of the kidneys interfere with the progress of cure, as in the following :

A man, about forty, of small stature, but moderately well formed—a clerk by profession—called on me, with a dis-

charge from the penis, who said that it could not be Gonorrhœa, for he had not cohabited with but one woman, who was beyond suspicion ; that he had slight runnings before, and they had always come from having connection with this person, soon after her menstrual periods had ceased, and this he attributed to the same cause, but it did not pass off, as it had on the previous occasion. He also informed me that some weeks since he had a violent pain in his back and loins, which lasted several hours, but it had passed off after taking a dose of oil. This was evidently produced by the passage of a calculi from the kidneys to the bladder ; his tongue was somewhat furred, some pain in passing urine ; the discharge from the urethra was pretty copious ; he complained of occasional uneasiness in the region of the kidneys, the external meatus was red and inflamed.

I directed him to take a mercurial cathartic, use freely diluent drinks, and take six five-grain pills of Castile soap every day, two at each meal ; turpentine frictions to the back at night. This plan was continued with the injections for about two weeks, with but slight amendment, when he was again taken with violent pain in the back and loins, which soon subsided, after taking *oli rici*, one ounce ; spirits turpentine, one drachm. The same treatment was continued. In about two weeks, the uneasy sensation in the back and the discharge from the urethra subsided.

It is a well-known fact that morbid action in one part of the urinary apparatus affects to some extent the other parts : hence, the presence of calculi in the kidneys was a source of irritation that extended itself to the urethra, which rendered the mucus membrane of the urethra not only more liable to become diseased, increasing its susceptibility, but rendered it much more difficult to restore healthy action ; but soon after the passage of a second calculi and the disappearance

of the pain in the back, the disease gradually yielded to medical aid. I am frequently called upon to treat cases of what are called gleet, that seem to have arisen from diseased action in the kidneys, and in almost all the cases that come under my care for treatment of catarrh of the bladder, I find the kidneys more or less affected; and in the post-mortem examinations that I have made of persons who have died of diseases of the urinary organs, I find the whole urinary apparatus more or less affected. I have one pathological specimen, where the pelvis of the left kidney is enlarged, and contains a number of calculi; the bladder is indurated, full of corrugations and sacs, with stricture of the urethra, and fistula. It came from a person who traced it to a Gonorrhœa, which had never left him for twenty years before his death, and, to use his own words, he "had taken balsam enough to swim a ship."

Sometimes Gonorrhœa extends to the

BLADDER.

The patient will complain of frequent desire to urinate, and pain immediately after the flow of urine, with a painful, uneasy sensation above the pubis. It generally comes on suddenly after exposure to cold or dampness. I have two cases under treatment now—one can be traced to exposure at a fire; the other to sleeping in a basement that was damp. Generally, when the bladder becomes affected, the discharge from the urethra ceases, but almost invariably returns as soon as the bladder assumes its healthy condition. In ordinary cases, the disease will subside in a few days by the use of active cathartics, leeches to the perineum, diluent drinks, and warm hip-baths. It frequently occurs, however, that as soon as the diseased action subsides in the bladder, the urethra takes on a more active inflammatory action than

previously, and particularly at the neck of the bladder, and it becomes necessary to apply the nitrate of silver injection to that part, and is also important to use cold-water injections to the rectum.

Cases very often occur where the protracted discharge from the urethra is the result of constitutional debility.

A man about twenty-five years of age called on me, with light complexion, narrow chest, rounded finger-nails; had suffered some from two attacks, within the last year, of *Hæmoptesis*; the discharge was of fourteen months' duration; his tongue was milky white; bowels were costive; his stomach was very irritable from the long use of balsam, cubebs, &c.; the discharge was light-colored and not copious—no pain in urinating.

Directed him to take blue mass, 10 grains; sulphate of quinine, two grains; followed with *oli rici* one ounce; and to take every day eight of the following pills: *R.* extract of sarsaparilla, extract cincho. equal parts, two drachms; oxyde of iron, three drachms, made into seventy pills, with a pint of ale or claret at dinner, with generous diet. Used at first a strong injection, afterwards modifying it according to indications. In about a month, by pursuing this plan, his general health began to improve, and the discharge stopped.

Now, in this case, there was a want of development, which is indicated by the narrow chest and rounded finger-nails. This latter symptom, rounded or imperfectly formed finger-nails, is one that I have been in the habit of impressing on the minds of students for thirty years past, and it is a very striking and important one, and is easily accounted for: the nails being situated at the extreme points of circulation, a vigorous arterial and capillary circulation, is required for their development, and consequently where the blood is imperfectly oxydized in its passage through

lungs that are not well organized, and impelled by an arterial apparatus of feeble force, it necessarily follows that deformity is the result. You observe another indication of debility: the discharge was thin and light-colored; there had been but little inflammation. It was what is generally called gleet. Therefore the system required a tonic and alterative course of treatment.

I could cite a great number of cases of this kind, modified by circumstances, and there is often great difficulty in regulating your tonics to suit the variety of cases. Sometimes, I find, the vegetable tonics suit best; at others, the mineral, or a combination of them. Pure air and exercise are very important remedies.

In these cases, when the disease has been protracted, you will often find that the coats of the urethra become thickened, which deprives them of their natural contractibility, and the discharge seems to be an exudation from an unhealthy surface. Under these circumstances it becomes necessary to use the bougie frequently, to promote absorption of this induration.

Sometimes the disease seats itself most obstinately at the neck of the bladder, the vesicula seminalis become implicated; semen is found mixed with the discharge; there will be diminished sexual capacity. In this kind of case, you must resort to the use of strong nitrate of silver solutions applied to the part, by adapting your syringe to a catheter. I have also used with success a tonic astringent to the rectum, after the cold-water enemata; but your main reliance is to arouse the system to healthy action by general tonics and alteratives.

In persons of this class, when the disease extends to the bladder, it becomes a disease of a serious character, and often terminates in a chronic catarrh, but by following the same

general principles that I have already laid down, this termination may be avoided. The best local remedy in chronic inflammation or catarrh of the bladder is to begin with injections of warm water into the bladder once or twice a-day for a few days ; then add a few grains of nitrate of silver to the injections, and gradually increase the quantity of this salt, until it produces considerable pain ; then stop for a few days, and watch the quantity of mucus in the urine. If that diminishes, and at the same time the desire to urinate is less frequent, you may either resume the injections or not, as circumstances seem to indicate. Another remedy that I have sometimes used with apparent advantage, particularly when there seems to be an enlargement or partial paralysis of the bladder, is a decoction of *secale cornutum*. The form that I prefer is the watery extract, in doses of from half scruple to half drachm. It is very important in the treatment of diseases of the bladder that the patient should be enabled to discharge all the urine contained in that organ ; for when it becomes diseased, it loses its vitality in proportion to its disorganization ; in the same proportion it becomes a foreign or non-vital organ : consequently, when the urine flows into it, chemical action and decomposition is the result ; sediment is deposited ; the urine becomes acrid and irritating, and if allowed to remain, is a source of irritation, and aggravates the disease. Another remedy that I have found valuable in this disease is warm salt baths, either general or the hip-bath.

The monesia was highly recommended some years ago in catarrh of the bladder, in the following form : R. Monesia, fifteen grains ; musk and camphor, each, seven grains ; gum traga., eight grains ; to make fifteen pills. Two morning and evening. I have in some particular cases used it with decided advantage.

Generally, however, I have relied more upon astringent enemias used after cold water ; a very weak solution of sulph. ferri, I have found very useful.

You will sometimes meet with cases of Gonorrhœa where circumstances to which the patient has been exposed have added to the violence of the symptoms, as in the following case :

A young man, a native of New Orleans, whose general appearance and health might be called good, contracted Gonorrhœa, and started immediately on a long overland journey to New York, before the time of railroads : consequently he was very much exposed to bad weather, and fatigue, in open and rough carriages.

When he arrived here, his penis was swollen, and the urethra in a high state of inflammation ; great pain in urinating, with copious discharges from the urethra ; tongue furred, with other febrile symptoms ; one of his testicles beginning to enlarge.

Ordered 10 grs. of sub. mur. mer., and 10 of jalap, with a warm bath.

On the next day his testicle was much enlarged ; the other inflammatory symptoms had somewhat subsided. I continued the antiphlogistic treatment for several days, using a watery solution of mur. of ammonia to the testicle and penis, with leeches to the spermatic cord, below Poupart's ligament. In about two weeks the swelling of the testicle and other inflammatory symptoms had nearly subsided, and the discharge was rapidly diminishing under the use of the nit. of silver injections, when he was taken with swelling and pain in the knee and wrist joints. By the application of—first, blisters. then, after a few days Goulard's cerate, with compression by means

of adhesive plaster and bandages—giving, internally, sarsaparilla and iodide of potassium—he recovered.

This young man had been exposed to a malarious atmosphere, while acting as an engineer. His blood had become vitiated, and he was in that state that we call in this country bilious; he was forced to travel over rough roads in an inclement season, without the power of using any remedial agents; all the symptoms were of the most aggravated form. It became necessary to use means for the purpose of allaying general irritation. This was accomplished by general remedies. It is not desirable to use strong nit. of silver injections in the early stages of cases like this, until the other inflammatory symptoms subside. I use, simply, cold water in the urethra, and cooling solutions outside, with emollient drinks, or, those substances internally that increase the quantity of urine, and render it less irritating; there are several of these that are highly spoken of. I think the parsley-root tea the best; but slippery elm and the bucku leaves are also very good

IN SWELLED TESTICLE,

OR, EPIDIDIMITIS,

more correctly speaking, a variety of treatment has been recommended, but I have found no local remedy so effectual as the application of a solution of muriate of ammonia, in cold water, about an ounce to the gallon. Cloths wet with this should be constantly applied, so as to envelop the testicle. I do not know upon what principle a solution of this salt acts better than the simple cold water, yet I have used it so much, with apparent benefit, that I have become attached to the remedy.

Leeches are often resorted to in Epididimitis, but in vitiated constitutions the bites are apt to be followed by a

troublesome sore, difficult to heal, and I have seen some cases in hospital practice, where the whole scrotum sloughed off, and I was obliged to take a portion of the surrounding skin to form a new scrotum; therefore, I generally apply leeches to the cord just as it passes from under Poupart's ligament: in this part you come nearer to the source of the circulation of the testicle proper.

When the disease assumes a chronic form, and the swelling continues after the inflammatory symptoms subside, it is necessary to resort to an ointment, composed one part, ung. hydr.; one part extr. belladonna; six parts lard, or to the ung. iod. potas., together with compression by adhesive straps; using the suspensory bandage if the patient moves about. This patient also suffered from

GONORRHOEAL RHEUMATISM.

For the cure of this affection, I have generally found that in the local treatment there is nothing better than blisters, followed by Goulard's cerate, and the compress with adhesive plaster and bandage. Generally this affection will be found in persons of rheumatic diathesis, and when the general health is not too much impaired, the calomel and opium treatment will be found very effectual.

But the main reliance is to be placed on constitutional remedies, such as the iodine and sarsaparilla.

I have sometimes had cases of Gonorrhœa that seemed to be connected with disease of the skin; for example, when the irruption on the skin shows itself, the discharge will cease, and when the irruption subsides, the discharge will return. I lately had a case where there had been a very slight discharge for some months, that seemed to resist all local remedies, when suddenly a patch of eczema showed itself on the

thigh, near the scrotum ; the discharge ceased, and he recovered under the use of alteratives and tonics. There is another form in which it is often presented, after the discharge has almost subsided from the urethra : the patient, by pressing the head of the penis, will discharge a small quantity of matter, which comes from just posterior to the glans. These cases I have generally treated by distending the urethra with a weak solution of deu. clo. mer., and they are often very troublesome.

Another of the sequela of Gonorrhœa is irritability, and discharge from the neck of the bladder, often attended with an involuntary discharge of semen. In some cases the seminal ducts will assume a morbid action, and semen will pass at the time of the alvine evacuation.

When this form of disease presents itself in a person whose system is weakened and exhausted by long-continued discharges from the urethra, or by masturbation, the tonic treatment will naturally suggest itself. At the same time, the application of a solution of nit. of silver to the neck of the bladder, will stimulate the parts to healthy action, and lessen the irritability.

It would be well to mention that I have had cases where the symptoms were so similar to Gonorrhœa, that it was very difficult to distinguish the difference.

A gentleman called upon me with a discharge from the urethra. I asked no questions, and he volunteered no information. I treated him for about a week without apparent amendment, when, upon inquiry, I found he had not had connection with woman for six months, but that he felt a pain in the rectum when the fæces were passing. Upon further inquiry, I found he had accidentally swallowed a part of the flat bone of a duck. In a few days he passed the bone, and the dis

charge ceased. The sharp-edged bone had lodged in folds of the rectum, and produced an inflammation extending to the urethra.

I once attended four children of the same family, three girls and a boy, who were all subject to a discharge, resembling Gonorrhœa, which was evidently owing to ascarides in the rectum. It may be said to be a common disease in girls, but very rare in boys.

So far, I have not alluded to the

POPULAR REMEDIES

for Gonorrhœa, and the reason is, that I am not in the habit of using them, except in cases that cannot attend me at my office regularly. Under these circumstances, I prescribe the capsules of either balsam copaiba, or the cubebs; but I am cautious in their administration, particularly the copaiba, for I have seen so many inveterate cases of dyspepsia produced by this remedy, that I am unwilling to prescribe its use for any length of time, and nearly all the quack remedies are composed of this substance in a disguised form. It sometimes produces an eruption on the skin.

Purgatives are a most valuable agent in the treatment of Gonorrhœa, and I know a gentleman who has a large practice among the laboring classes in this city, who relies almost entirely upon the following prescription:

R Cucum. Colocy., ʒss.

Sal. Prunel., ʒis.

Gum. Gamb., gr.xv.

Sang. Drac., ʒss.

Aq. Bullens, lb.ʒ.

A wine-glass full two or three times a-day:

But large practice is not always an indication of success.

Another remedy that has been highly recommended to check gonorrhœal discharges is the sulphate aluminic, but, so far as my experience goes, it has not answered expectations. It has been used in combination with cubebs, in some cases that are commonly called gleet, it seems to be indicated, and I think may be found useful.

It is the practice among surgeons, when writing on the treatment of Gonorrhœa, to caution practitioners not to use strong injections, for fear of producing stricture. Now, we have had a very long experience in the use of strong injections of nit. of silver, and we never yet have seen stricture result from that cause; and, we confess, we cannot see why an inflammation produced by a strong injection would be more likely to produce stricture, than an inflammation arising from Gonorrhœa itself; and the principle upon which we suppose the nit. of silver to act, is the setting up of an action of a different form from the original one, and one that is more easily subdued, and not so deleterious in its character; and it seems to me that it does not necessarily produce another inflammatory action, but that it simply destroys the acrid quality of the discharge, perhaps by chemical decomposition; for I find that it is necessary to use a syringe with a long tube attached to it, so that I can introduce it the whole length of the urethra, or as far as the morbid action extends.

A great variety of injections have been recommended in this disease, such as solution of acet. of zinc, acet. of lead, chlo. of lime, opium, tannin, and lately bals. copaiba has been highly spoken of.

STRICTURE OF THE URETHRA.

Obstructions to the free passage of urine may arise from a variety of causes, such as over-distention of, or tumors within, the bladder; enlargement of the lateral or posterior, or third lobes of the prostate gland, stone, tumors invading or pressing on the urethra, or from morbid contraction of the urethra itself.

The last we call stricture, which is generally the result of some injury of the part, or follows a protracted, badly-managed, or neglected Gonorrhœa. It may, however, be brought on or produced by disease of the bladder or kidneys, of long standing, or from injury of the urethra itself, or from a fall or bruise, from which inflammation follows. Such injuries frequently occur while riding on horseback, or falling astride some hard substance—such as sailors falling across spars, or persons in the country across fences; horsemen are often thrown upon the pommels of saddles. But generally your patient will inform you that he has suffered from Gonorrhœa at some period, and that he has not passed his urine perfectly since about that time. He often attributes his trouble to want of skill in the treatment, but it generally arises from his own neglect or imprudence. Many physicians place the patients under strict diet, during treatment for Gonorrhœa, and when the running ceases, the patient considers himself relieved; yet the parts of the urethra involved in the disease are not perfectly restored: induration still remains, the secretions are not fairly established—the patient returns to full diet, and perhaps to irregular habits; the indurations remain, and increase from obstruction in the passage of the urine, and stricture results. Any thing that has the tendency, in any way, to impede the free and smooth passage of the

urine, will produce stricture; for it generally begins by a deposition of coagulable lymph, either on the inner surface of the urethra, or in the surrounding tissues.

All persons who have treated Gonorrhœa know that patients will sometimes complain of pain in urinating, and slight chordee after the discharge has ceased, which is caused by the remaining induration, and this is apt to produce stricture, particularly in persons of irregular habits, and in those pre-disposed to rheumatic disease. Hence the propriety of sometimes introducing a bougie to stretch the urethra, so that the indurations may be absorbed. We frequently find that this condition of the urethra keeps up a slight discharge, which is relieved by dilation. It may be well to speak here of the pre-disposing causes of stricture, for it is true that some persons are more liable to it than others. Persons of scrofulous diathesis are of this class. By scrofula, I mean imperfect development. This is the doctrine that I have taught these twenty years: but as I could not give a European father for it, it would not take root until lately, when it has come over the water. The urinary and genital organs of some individuals are imperfectly developed; in some, the whole apparatus may be imperfect; in others, the penis is very small—the prepuce elongated, and the urethra very small; in others, the opening may be low down on the penis, approaching hermaphrodism, and in all the malformations of these organs, there is more or less imperfection of function, giving rise to disease. This class of persons I have found much given to Onanism, which brings on involuntary discharges. They are peculiarly liable to contract Gonorrhœa, and difficult to relieve. The disease is generally protracted, and liable to be followed by stricture. Let me illustrate by a case: Mr. G., aged twenty, applied to me: his penis was very small—his prepuce was very much elongated; he was unable to uncover

the glans; he had practiced Onanism for several years; he had grown very rapidly—was tall and slender, of light complexion; chest narrow, and pelvis small. He had been advised to cohabit, as a remedy for the Onanism, and soon contracted Gonorrhœa.

After having for several months resorted to the usual treatment without relief, in a fit of desperation he took to drinking brandy, and high living, and to his surprise the Gonorrhœa subsided. In a short time, he contracted the disease again, but this time the old remedy failed to relieve him, when he applied to me. There had been a discharge from his urethra for twelve months. There was considerable pain in urinating; the stream was very small; the prepuce was enlarged and indurated, and tender to the touch. I put him upon a course of alterative treatment; gave freely of emolient drinks—removed the elongated prepuce—clipped the frœnm, so as to allow the glans to be freely uncovered—gradually dilated the urethra—used injections, and he soon recovered. His general health improved, and the involuntary discharges ceased.

In this case he was rendered liable to the disease by the poisonous matter insinuating itself within the prepuce, and being retained there. The usual antiphlogistic treatment debilitated his system, and increased the irritability of the parts; hence the tonic and invigorating influence of brandy and high living so invigorated his system, that it was enabled to throw off the disease. But, the second time, his system was not in a condition for the tonic treatment; his intemperance aggravated the disease, and induration and stricture followed. Here let me observe that I have noticed that persons whose glans penis is habitually covered, are more liable to contract both Gonorrhœa and Syphilis than where it is naturally uncovered. In the first case, the surface, or skin of the glans

nearly approaches mucous membrane; in the latter, it more nearly resembles skin: hence the wisdom of circumcision.

Another case in which imperfect development seemed to be the cause of stricture, was that of a boy, about eight years of age, supposed to have stone in the bladder, as he had experienced pain and difficulty in urinating, from his earliest infancy. The penis was small; there was scarcely any prepuce; the glans was habitually uncovered; the urethra terminated in a very minute opening at the anterior base of the glans, where the frænum is usually attached; the stream of urine was very small, generally in drops, with great pain and straining. On introducing a very small bougie, I found the anterior covering to the urethra very thin for about an inch, thence onwards it seemed to assume its natural thickness; but, at this point of change in structure was situated a very painful and contracted stricture. By incising the external opening, and dilating the stricture, he was finally relieved. Hence it may be seen that malformation or imperfect development obstructing the passage of the urine, irritation, inflammation, and consequent indurated stricture was the result. Any malformation that has a tendency to interfere with the free passage of the urine, is a predisposing cause of stricture.

Another class of persons that seemed very liable to stricture is the gouty and rheumatic. It would seem that whenever such persons (particularly the latter) have local inflammations, indurations are apt to follow; thus, when they receive a wound or an injury, it will be followed by rheumatic pains and indurations. I have treated a great number of persons of this diathesis, and found them very difficult to manage. The progress of cure is always slow, and they are constantly liable to a recurrence of the stricture. A case of this kind has been under my care for seven or eight years. The man is a paper-maker; he is almost constantly suffering from rheumatism in

some form or other; his business exposes him to changes from a moist and warm atmosphere to cold winds, and every time that his rheumatic affection returns, his urethra contracts. I have observed, also, that in these kind of constitutions gonorrhœa is generally very troublesome, and, when protracted, is apt to be followed by stricture.

At one time he gave up his trade, and, finding himself so comfortable under the change, he thought he might return to it with impunity, but in a few weeks he came to me again, with his stricture as bad as ever. I could cite a great number of similar cases, which go to show the intimate connection that sometimes exists between stricture and rheumatism.

There are several local diseases that predispose to stricture, such as enlargement of the prostate, and catarrh of the bladder. I had a case that arose from an induration in the spongy portion of the penis, which slightly impeded the regular passage of the urine; eventually a stricture followed that was very troublesome to keep open. I was called upon by a gentleman, having an obstruction in his urine, and found a calculus lodged in the membranous portion of the urethra, which had been there some months; after removing the calculus, the part remained indurated and thickened; the stream was small, and it required several weeks' dilatation to remove the stricture. Sacs in the course of the urethra may be the cause of stricture. There is a gentleman who calls on me two or three times every year, to have his stricture dilated, and when I pass the bougie it stops at the membranous portion, and seems to go a short distance into a *cul de sac*; but by withdrawing it and elevating the end of it a little, it can be passed, and by enlarging the opening with bougies, the stricture passes off in a few days, and does not return for some months.

A great deal has been written with a view of illustrating the condition of the parts, the form and situation of stricture.

In nearly all the *post mortem* examinations that I have made, I have found the surrounding tissues indurated, and where the disease has been of long standing, the urethra itself thickened and contracted. This state of things may exist throughout the whole canal; it may exist in several different parts; it may extend an inch or more, or it may be confined to a very small portion of the urethra. I have had a few cases where the whole urethra felt externally like a cord, and on attempting to pass a bougie, have found it tortuous; in some of these cases there is great irritability, and I have difficulty in allaying it, so as to introduce the bougie. In some cases, a small, pliable gum elastic bougie, without a stilet, may be used successfully. It is stated that out of ninety-eight specimens of stricture in the Museum of the Royal College of Surgeons, twenty-one only were situated in the membranous portion, and seventy-nine anterior to the triangular ligament.

According to my experience, it may occur at any part of the urethra, but the most common seat is between the glans and the membranous portion.

Many of those cases occurring at the triangular ligament are produced by improper management in attempting to introduce catheters and bougies. When it occurs in the glans itself, it is generally congenital, or arising from some malformation. I have seen cases where the frænum extended up to the meatus, and whenever the erections took place, the head was drawn forward, making coition sometimes difficult. In persons with this malformation, onanism is likely to produce stricture. I have also observed, that persons who have naturally small urethras are pre-disposed to stricture.

Various classifications have been adopted by surgeons when treating of stricture.

The most natural division seems to me to be spasmodic,

bridle, or valvular, and indurated; they may exist separately or in combination. [*See plates.*]

Spasmodic stricture, so far as my observation extends, arises from some irritation, or disease of the bladder or kidneys, the passage of calculi, excessive venery, disease of the neck of the bladder, the vesiculæ seminalis, or gonorrhœa.

Civiale says, "that various irritating causes sometimes produce a sudden contraction of the canal of the urethra, which renders emission of urine difficult and painful, and often stops the passage altogether; and that these spasmodic strictures are often produced by excessive venery," and cites the following case: "W. N., an Italian, aged 30, having had gonorrhœa several times, for which he had taken no anti-phlogistic remedies, and which continued to show itself when he was irregular in diet or drink, coition always produced stricture of the urethra, which lasted some hours, and when the erections were prolonged, retention followed, which was removed with difficulty. Since he had abstained from coition, he was not troubled with either disease."

Segalis says, "Spasmodic stricture is the result of abnormal contraction of some of the muscular fibres entering into the structure of the urethra, and is characterized by its duration; that it never occurs in any part of the canal that is not surrounded by muscles, and mostly occurs in the membranous portion." He also says that "it may be produced by any thing that agitates the nervous system."

It is said that the celebrated Rosseau was subject to spasmodic stricture all his life, and when a *post mortem* was made, there was no organic lesion found

Mr. Bingham says "that it is well known that nervous irritation in muscular parts often occasions partial and obstinate contractions, and where this effect takes place in the urethra, it constitutes what is generally called spasmodic

stricture; but as the expression is often applied to any kind of stricture that can be dilated to the full size of the urethra, so nervous irritation, muscular contraction, and, to a certain degree, inflammation may be present in spasmodic stricture, as may be observed in the following case :

I was called to see a gentleman who had just arrived from New Orleans; he had contracted gonorrhœa before he left—had been dissipated in his habits, during the voyage, suffering from pain in the back, and over the pubis, passing his urine in drops with pain and difficulty. After he was freely leeched on the perineum and pubis, had taken a warm bath, I attempted to introduce a catheter, but found the spasm and contraction so great that I desisted, and ordered a large dose of calomel and Dover's powders—put him into a warm bath; in a few hours his urine was passed with a little more freedom. He then took a large dose of castor oil. As soon as it operated, I found I could pass the catheter; the inflammation and contraction having passed away, his gonorrhœa was relieved in a week or two. He was not afterwards troubled with stricture. This was evidently spasmodic stricture, brought on by irritation and inflammation; and I am inclined to think that most cases of spasmodic stricture result from diseased condition of the parts, or some of the contiguous organs.

Persons who have had slight strictures for some time, may be attacked with spasmodic stricture, and retention after an excess in drinking, or exposure in wet and cold; but as soon as the constitutional irritation subsides, the spasm will cease.

In plates 1, 2, 3 may be seen what is meant by Bride or Valvular Stricture; in plate 1, we have bride, under which a horse hair has been passed; just behind the stricture you see the urethra is enlarged, and, from constant distention in the efforts to urinate, several slight *culs du sac* are formed. Cases are often met with where there is but a single bride



Plate 1.



Plate 2

or filament extending obliquely or otherwise across the urethra. In taking an impression of them with a wax exploring sound, they may be easily discovered; and I have several times had cases where, on the introduction of a large bougie, the bride would break; there would be a slight discharge of blood—the stream would assume its natural size, and the patient be relieved. Some years ago, a friend of mine called on me to sound him for a stone. On introducing the sound, I met an obstruction, which gave way quite suddenly to a slight force; the sound then passed into the bladder. On drawing the sound, there was some blood flowed. He has never been troubled with any difficulty in that region since.

These bridle strictures are often combined with the valvular. They seemed to be produced in this way: Diseased mucus surfaces are liable to generate or form filaments of coagulable lymph, particularly when an irritating fluid is constantly acting on them (a phenomenon that may be seen in diseased bladders). The mucus surface of the urethra being diseased, and the constant irritative action of the urine upon it, causes the filament of coagulable lymph to be deposited on its surface; these go on increasing, until an obstruction in the passage of urine is the result; as soon as this takes place, the efforts made to pass it increase the irritation of the part; more lymph is thrown out to make new formations; the passage of urine being still more obstructed, inflammation extends to the surrounding tissues, and permanent stricture is formed in combination with valvular, as in plate 2.

The valvular stricture is very manifest in plate 3, fig. 1, where it seems to involve the greater portion of the urethra. Sometimes the stream finds its way under the base of the valve, and another passage is formed, as in plate 2.

These valvular strictures present great varieties of form and character. I have a preparation in my collection, where

a small stone had got into a valvular stricture, but I could not learn whether the stone had caused the stricture, or that its passage had been arrested by the stricture.

The existence of stone habitually in the neck of the bladder, will cause stricture, as illustrated in plate 4.

This specimen I met with when making pathological investigations in cholera: there was an abscess partly surrounding the prostate gland; the stone had formed a bed for itself: the irritation extending to the urethra; stricture at the membranous portion had followed. Finding the catheter would not pass, I removed the parts, and found them as represented. By

INDURATED OR PERMANENT STRICTURE

is meant that condition of the parts, where the surrounding tissues become solidified by the deposition of coagulable lymph, diminishing the vascularity of the parts. It may be confined to a particular portion, or may extend to the whole of the urethra.

In this specimen, (plate 3, fig. 2,) the covering of the urethra is thickened, and a part of the spongy portion is filled with coagulable lymph. I have frequently had patients of gouty and rheumatic diathesis, where the spongy portion was indurated from the glands to the triangular ligament. I have now a case where the stricture is situated just within the glans penis. It frequently occurs within two inches of the meatus-externus, and is often very troublesome to relieve. I had a case of a sea captain, where the stricture extended from the glans penis inwards about one inch; the stream was very small; the surrounding parts felt solid upon pressure. I found the pain and difficulty of dilatation so great, that I laid it open with a knife. He had got it into this condition by his own treatment while at sea.

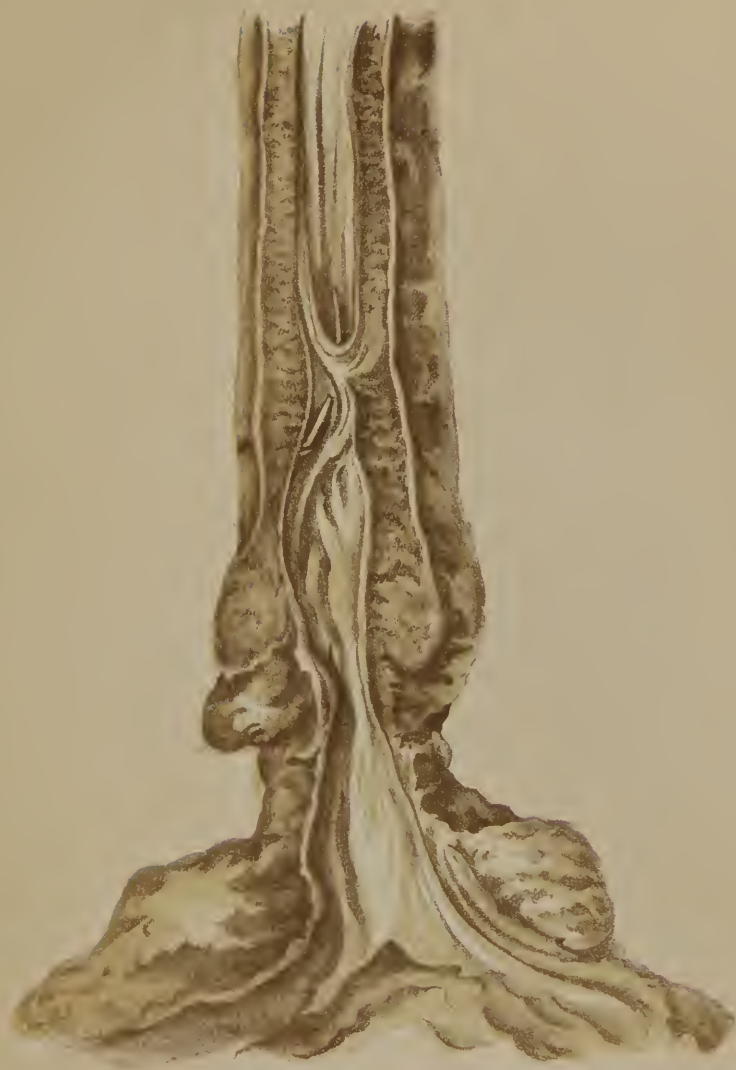


Fig 1

Plate 3



Fig 2



Plate 4.

Before entering on the treatment of stricture, it will be proper to speak of the different kinds of catheters and bougies, and the method by which these can be introduced into the bladder with the greatest facility.

For the purpose of drawing off the urine, or for exploring the urethra of a well-formed adult, a common silver catheter, No. 8 or 9, is the best. I say pure silver, so that you can alter the curve without danger of breaking the instrument; when there is alloy in the silver, it is liable to break in changing. In some cases of stricture, where the passage is surrounded by indurations, or is tortuous, the gum elastic bougie is best. It may be used with or without a wire stylet: sometimes, by withdrawing the stylet an inch or more, we may facilitate the passage in allowing the instrument to adapt itself to the irregularity of the urethra.

For catheters and bougies a variety of substances have been used. For many years I was in the habit of using silver, but requiring a large number, and of various dimensions, I have adopted soft iron. They may easily be made from wire of different sizes, from No. 2 up to No. 16, and when used by persons who have studied accurately the structure and relative positions of the urinary organs, they are as good as any other.

In the hands of a dextrous operator, the curve of the instrument is not of much importance, where the stricture is not much contracted, or not situated posterior to the bulbous portion; but in difficult cases, it is very important that the curve should be adapted to the size of the pelvis or the obesity of the patient. The curve of the bougie or catheter should occupy 150 degrees of a circle, except 30 degrees of the point, which should incline inwards $\frac{1}{4}$ th of an inch, as may be seen in plate 6; this divergence from a circle at the end will be found useful when the prostate is enlarged, or the

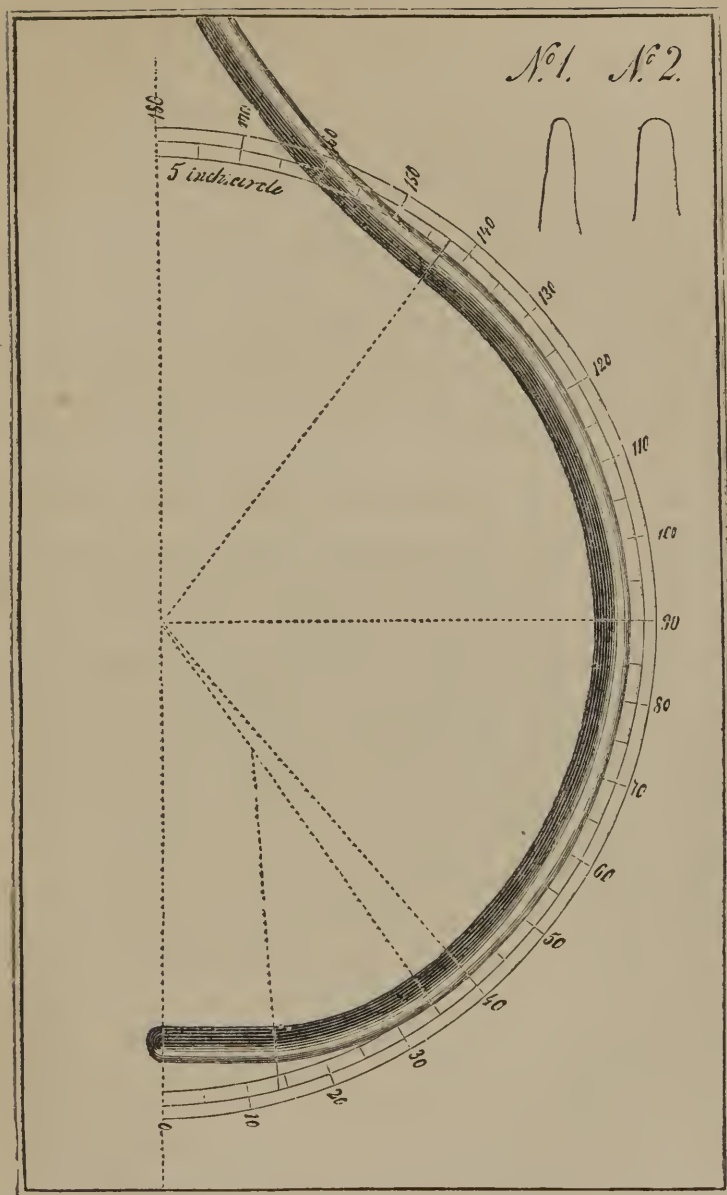
bladder elevated by retention of urine. The size of the circle will be regulated by the age or obesity of the patient. The largest diameter of the circle may be five inches for corpulent adults; from that down to three inches, according to the size of the pelvis and condition of the surroundings. Some discretion is necessary for regulating the point of your bougie for dilation. I prefer the conical termination.

In stricture, where the passage is very small and indurated, the point should be small, as in fig. No. 1. If it is a bridle stricture, and not much indurated, the blunter point in No. 2 will not be so liable to entangle itself within the folds of the urethra, and by that means get out of the track, and make a false passage. For the

INTRODUCTION OF THE CATHETER

the patient should lie on his back, with his head and shoulders elevated, his knees a little drawn up, so as to relax as much as possible all the muscles connected with the pelvic region or the neighboring tissues. Some persons have recommended the standing position, for the introduction of the straight bougie, but in treatment of stricture there is no advantage gained, either by the use of the straight bougie, or by placing the patient in the standing position. Having placed him at perfect ease, standing on the left side of your patient, take the handle of the instrument (well oiled) in the right hand, as you would a pen, holding it loosely; then, holding the penis with the left hand, pass the end of the bougie into the penis, holding your right hand obliquely over the left groin, until the instrument, being introduced to the arch of the pubis, lays flat in the groin and obliquely across the pelvis, and in line from the left tuber ischii to the penis. Then slowly elevating the handle of the instrument upwards and inwards, towards the symphysis pubis, keeping the inner flat surface of the

STRICTURE.





handle facing the abdomen, allowing it to pass more by its own weight, than by any force or guidance of the hand; for, if there is no obstruction, very little force is required, and in many cases nothing but the weight of the instrument, if it is made of solid metal. When the handle of the instrument stands perpendicular to the body, the point of the bougie is at the membranous portion; here, if the instrument does not pass with perfect ease, depress the handle gently, and use a gentle pressure, which may be continued for some time; if it does not then pass easily, oil your finger, and also the region of the anus; and, gently introducing your finger into the anus, find the end of the bougie, elevate the point with the finger, pressing gently with the right hand on the handle, it will soon pass into the bladder.

Although these directions will greatly aid the student in the introduction of the catheter, yet a thorough knowledge of the anatomy of the urethra, with the surrounding tissues, and of their functions—with frequent practice on the dead and living—can only give the necessary facility to enable him to practice successfully this, sometimes, most difficult of operations. And it is advisable for the student who wishes to acquire the necessary tact, to carry a catheter with him in all his anatomical and pathological investigations, and introduce it on all occasions, when it can be done with propriety. In this way he will acquire that valuable aid so necessary to the surgeon—finger-end tact; and he will also, in the course of his investigations, often meet with valuable pathological specimens to add to his collection.

It is impossible to give directions for the introduction of the catheter that will enable the student to meet difficult cases of stricture; for they assume such an infinite variety of form and character, that it will necessarily modify the mode of procedure, according to circumstances; but, as a general

rule, gentle, long-continued manipulation, with a perfect knowledge of the anatomy, and the relative position of the parts, with the introduction of the finger in the rectum, for the purpose of giving the end of the instrument the right direction, will succeed in the most unpromising cases. Retention of urine in stricture generally arises from some derangement of the system: the patient has either been on a frolic, exposed to cold or wet, or to some unusual excitement, which has brought about the difficulty. Hence the necessity, before using the catheter, to administer nauseating purgatives, warm baths, &c., so as to produce a decided effect upon the secretions and excretions; and my experience leads me to believe that cystotomy is an operation that is rarely required for retention of urine, when the case has been properly managed; yet I have known it resorted to where I have afterwards found no permanent obstruction whatever. A gentleman, traveling in the Western States, was taken with retention. A physician was called; he could not pass the catheter; he resorted to puncture above the pubis; and when the patient applied to me, two weeks after the operation, he was passing his urine through a tube in the opening. I introduced a catheter into the bladder by the urethra, without the least difficulty. Kept it there until the wound healed, and the patient was restored—without any trouble in passing his urine. In this case it was very evident that the necessary and proper means had not been adopted to relax the parts previous to resorting to the operation. I could cite a number of other cases where cystotomy has been unnecessarily performed. Indeed, it would be painful for me to report the many mistakes made in these kind of cases, which have come under my observation, for the want of proper knowledge. One will illustrate: A gentleman accidentally fell down a cellar-way; when taken up, his lower extremities were paralyzed, and it was soon found

that his abdomen was distending from the accumulation of urine in the bladder, owing to the paralysis of the muscles of that organ. Several physicians were called in, and a number of attempts were made to introduce the catheter, and draw off the urine. At last the catheter apparently passed into the bladder, but nothing followed but blood. After a variety of unavailing efforts, it was concluded, upon consultation, that the bladder was filled with clotted blood, and that the urine could not pass on that account; it was, therefore, decided to puncture the bladder. As preparations were making for this operation, I arrived, having been sent for by one of the friends of the patient. I was requested to examine the case before the operation was performed. After hearing all the circumstances of the case, I took the catheter, and introduced it without the least difficulty, and the man was relieved, and the paralysis passed off in a few days. Now, "what was the difficulty in this case?" If we look at the anatomy of the parts concerned, we find the urethra, as it passes out of the arch of the pubis, is firmly bound down to its position by the triangular ligament, and that the lowest and lateral portions of the bladder are surrounded by bone and viscera; consequently when the bladder becomes distended, it rises in the pelvis, and is pushed forward and upward—as illustrated by the plate, No. 3; and the more the bladder is distended, and pushed up and over the pubis, the more the urethra is lengthened and contracted. And it may at once be seen that, on introducing the catheter, in proportion to the distention of the bladder, must be the depression of the handle and the elevation of the point of the instrument, and distance required for insertion. Thus it may easily be seen that, if the end of the instrument is not turned up, so as to follow the inner surface of the pubis, it will get out of the passage, and pass up under the prostate; and I have known cases where it was passed



No. 3.

into the rectum, and by experienced hospital surgeons. One case came under my charge, where this accident occurred and the greater part of his urine was passed by the rectum. I succeeded, however, in getting a catheter into his bladder; he retained it there a few weeks, and he recovered. But his venereal powers were destroyed, and his young and beautiful wife, to whom he had been a short time married, left him.

I could tell a number of accidents of this kind, but one more will be a sufficient warning to young surgeons, and verify what was said by John Bell, and in which sentiment I concur, that the introduction of the catheter is often the most difficult operation in surgery: Some 25 years ago, it was the fashion in Paris to treat strictures by passing the conical bougie. One day, in going the rounds of the hospital, I saw an eminent surgeon introduce a conical bougie of a large size; he used considerable force, and great pain was manifested by the patient. The bougie was secured in the bladder, and I saw nothing more of the patient, until a few days afterwards I was in the dead rooms, and I saw the man laid out, with the

bougie secured in his bladder. With the assistance of a friend, I removed the parts, carried them to my room, and made careful dissection, which specimen I have kept in my collection. I found that the bougie had passed out and under the urethra, at the bulbous portion, and re-entered the bladder, just back of the prostate.

THE TREATMENT OF STRICTURE

Must depend upon a variety of circumstances; almost all surgeons who have written upon the subject, have advocated particular plans of treatment; some recommend cauterization, with nit. of silver, or with the vegetable caustic; and others, by dilation, either by simply passing the bougie, or by securing it in the urethra until the urine passes around it. I have treated them upon all these plans, but I mostly rely upon gradual dilatation; yet cases often occur where other methods are advisable. The *constitutional treatment* of stricture has been too much overlooked by surgeons generally. All local disease, if not generated, is aggravated by a vitiated state of the system generally, and particularly by derangements of the viscera, connected with the alimentary process. Consequently, it becomes very important, before you apply local remedies, to see that all the secreting and excreting organs are performing their functions properly. It is, however, true, that the local disease sometimes becomes so prominent, as to materially affect the general health, in such cases, that both should be attacked at the same time.

It rarely happens that you are called upon to treat a stricture that you will not find a furred tongue. This is nearly always an indication to give a mercurial cathartic; and if one does not remove it in a few days, I repeat it, particularly if the general strength of the patient is good; if not, I add

quinine to it, which supports the system, while the mercurial corrects the secretions. One distinguished surgeon that I know, advocates emetics in stricture; and I know that he has found an emetic, given every third day, to aid very much in promoting absorption in indurated stricture. Patients who have been laboring under stricture for a long time, in our southern climate, become very much exhausted. It would not be prudent, in such cases, to give active cathartics or emetics; but you may regulate the secretions and excretions in such cases, by giving tonics, alteratives, and diluents.

It was wisely said by Abernethy, that the progress and termination, and often the origin, of disease, was dependent upon constitutional derangement, and the remedy that would the most effectually remove this was a great desideratum in medical science. The agent he adopted for the accomplishment of this object, was mercury, in the form of what is commonly called blue pill; it being, perhaps, less irritating to the bowels than any other form of that metal. This article has been denominated, in medical phraseology, an alterative, because it changes, alters, or increases the action of the secreting and excreting organs—those organs that throw off the effete matters in the blood; it being purified, healthy action is restored. The constitution, or the *vis medicatrix natura*, as Cullen calls it, is enabled to remove the local disease; and since his time, no medicine has been more used and abused. In practice you often meet with persons to whom this remedy does not seem well adapted, and it is sometimes hurtful. Since the discovery of the various preparations of iodine, physicians supposed that a good substitute for mercury had been found, and in many cases it is an invaluable remedy, and seems to be both alterative and tonic; but it does not always answer the purpose, but becomes an irritant,

and judgment and skill are required in its adaptation. Some thirty years ago, upon being appointed surgeon to an hospital, the druggist who furnished the medicines informed me that he had purchased at auction a large quantity of extract of sarsaparilla that had been sent from England, but he could not sell it; and, having been on hand a long time, he requested that I would make a trial of it at the hospital. (The article was but little used in this country at that time.) There was a large number of chronic cases in the wards, that had been accumulating for a long time—mostly secondary syphilis and diseases of vitiation. As it was a cheap remedy, I accordingly ordered it freely used; and to my gratification, and to the astonishment of the house-surgeon, in from six weeks to three months, the wards were nearly clear of this class of patients. One of these was a man whose abdominal parieties had been removed by ulceration over a surface eight inches in diameter, leaving only the peritoneal covering. Since that time, I have been constantly in the habit of using this remedy whenever I have wanted to establish healthy secretion and excretion. I have used it in all its forms, but mostly in the form of extract. There is a great variety in the opinions of medical men, as to the use of this medicine; and many of the most eminent have pronounced it a mere placebo, while others, particularly those who have the advantage of getting it fresh from the ground, have praised it very highly. Much of this diversity of opinion has arisen from the difficulty of procuring a pure and good article, and then having it properly prepared. The extract is rarely found of much value, unless the root is recently imported; and it requires the greatest care in its preparation; and it has been with great difficulty that I have been able to procure an article on which I could rely. Some years since, while attending a member of Dr. Brandreth's family, he informed me that he

had succeeded in making extracts at a very low temperature, and he prepared for me an article that I used extensively, and found it very pure. Another article that I have used for a long time, and found very effectual in purifying the blood, is the extract or infusion of the guac wood, and it is admirably adapted to dispensary and hospital practice, on the score of economy.

Then, after correcting the state of the secretions, the next thing is the local treatment; spasmodic or inflammatory stricture will require but little local treatment; by allaying constitutional irritation, the disease will generally subside; one or two introductions of the larger-sized bougie will aid in removing the difficulty. I was called upon, some time since, to treat a gentleman for gonorrhœa. He went on well for two or three days, when suddenly, upon getting his feet wet, he was taken with violent rheumatic pain in the region of the ankle-joint, and with retention of urine. After giving an active cathartic emetic, and placing him in a hot bath, I passed a small catheter. I found the urethra contracted from the fossa navicularis to the membranous portion; as soon as medicine operated, his retention was relieved; with a few insertions of the bougie, and two or three injections of nit. of silver in weak solutions, he was entirely relieved, both of the stricture and gonorrhœa. This was a patient who was subject to rheumatic affections; the urethra being already diseased, disposed the stricture to fix itself there. Another class of cases that may be spoken of here, are persons whose nervous systems are easily excited, and have suffered from gravel passing from the kidneys, which leaves behind a slight uneasiness in the back, which is aggravated by exposure and excesses of all sorts. They call on you, and say that the size of the urethra seems diminished, and that they sometimes have pain in passing urine, particularly when the general

health is deranged; upon introducing the bougie, you will find that the urethra is diminished in size. These patients can only be relieved by improving the general health, and a few introductions of the bougie. In a great many cases, where persons have applied to me with gleet—or rather a slight discharge, coming on occasionally, when the general health is impaired, or when the patient has been indulging in drink freely—they will tell me that they have had a slight discharge from the urethra ever since they had the gonorrhœa. They are not sensible that the stream is much diminished: but occasionally it is passed with pain; in these cases, you will find that there is contraction of the urethra, and that it is tender in a particular part, generally about three inches from the external meatus. These cases may be easily relieved by introducing a large-sized bougie, and dilating the urethra to its full extent; and then injections of nit. of silver will change the action, and the trouble will cease, provided the patient is not intemperate; but any indulgence will produce a relapse.

Thus we are called on to treat a variety of mild forms of stricture, that only require the general health to be improved, and the slight disorganization removed by dilating the urethra to its full size.

Stricture presents such an infinite variety in character and form, that it is difficult to give special directions for their treatment. As I have said before, bridles sometimes form in the early stage of stricture. I have, on several occasions, when introducing a large-sized bougie, found the passage completely obstructed; but by gentle pressure, the bridle would suddenly give way. I have seen some morbid specimens, where a single bridle extended across the urethra, which could easily have been broken. In the explorations of the urethra, where you have reason to believe in the existence

of stricture, it is always the best plan to introduce a large bougie, until you come to the stricture; then you can use the bougie with wax at the end; by pressing a short time against the strictured part, you will get an impression that will guide you as to what course to pursue. You can also learn something as to the condition of the parts, by placing the finger in the rectum; if the stricture is in that part, and there is much induration, you feel that the urethra is hard like a cord; if the impression on the wax shows a conical form, by pressing gently with the conical bougie, you will find it advance a little; you must not urge it too far, but use gentle pressure, for some two or three minutes, and then let the parts rest a day or two. Give your patient parsley-root tea to drink freely, and try the conical bougie again. Thus continue to make several successive trials, and in most cases you will eventually get past the stricture, by this gentle manipulation alone.

It is especially important to avoid using much force when the stricture is situated just anterior to the triangular ligament. It is sometimes the case that you may introduce a large instrument better than a small one.

I have often introduced No. 12, when I could not succeed with No. 6. In the size of the instrument, you must, however, be regulated by the impression made on the wax. If the stricture is anterior to the bulbous portion, it is only necessary to introduce a small conical bougie, by gentle pressure, every day, or every other day, gradually increasing the size, until it is sufficiently dilated; but, in this last-named region, it is more liable to contract after it is dilated. Hence it is necessary to continue the introduction of the bougie for some weeks, until the induration subsides, and the parts assume their natural tone.

In the treatment of stricture, I have, after long experience, come to the conclusion, that the majority of strictures that

present themselves in ordinary practice, can be better treated by dilatation with the conical bougie, than by any other method; and upon examination of cases, on referring to my notes, I find that in not one case in fifty have I resorted to any other treatment; yet other methods have been so successful in the hands of many distinguished surgeons, that I am disposed to give them due consideration, and I must say all plans are attended with risk. The great danger in dilatation is getting out of the right track; this will often occur in the most skillful hands; but this always can be discovered, if due care is taken. I have generally, when I apprehended I was not in the right course, allowed the parts to rest a few days, to recover from the effects of the first introduction; then to pass an exploration bougie of wax, and get an impression of the part, and this will generally aid you very much. If you have gone out of the track, allow the parts to heal; let the patient drink freely of parsley-root tea, and then make an effort with a bougie, with a larger point; press gently; if you do not get on, wait a day or two, and try again. Manipulate a little with your finger on the outside; change the curve of your instrument. Thus, by gentle and persevering efforts, in a majority of cases, you will succeed. I have in some cases made twenty efforts before I have succeeded: and I am satisfied if I make a slight advancement each time. There will generally a little blood follow, succeeded by slight suppuration, with an increase in the facility of urinating; and thus you are encouraged to persevere. Success in this process depends very much on tact: in watching the direction of the instrument, and in feeling the position from the outside. I have sometimes been led to believe that the instrument was not in the canal, by observing the handle, when standing in the urethra. If much inflammation follows your effort at introduction, give your patient mercurial cathartic; but unless it runs high, pay no

attention. Suppuration opens the passage as soon as it subsides; you find your instrument will pass further, and it has frequently happened in very unpromising strictures that the instrument has passed at the first or second insertion, as you see in the following cases:

A Mr. T——, aged 35, called on me with stricture; general health, good; system, in a like condition. He said I relieved him several years since, but he did not follow my directions, and it returned.

Upon introducing a large instrument, I found the stricture at the junction of the bulbous with the membranous portion; externally, the parts felt hardened. I introduced No. 6, with conical point; used gentle pressure for ten minutes; it entered some half inch, and was grasped tightly by the stricture. A few drops of blood followed; next day the stream enlarged a little. I passed a catheter, No. 10, with very little pressure, in ten or twelve minutes; I found it slowly passing, and soon went into the bladder, but was grasped very tightly by the stricture. Some blood followed. I ordered parsley-root tea, and blue pill and jalap; directed him to call in three days. When he called again, he said he suffered a good deal of pain the night after the introduction, when urinating; but since then his stream has been large and free. Continued the bougies every other day for three weeks, increasing the size to No. 14; directed him to continue to use it himself for some months.

Many years ago, while a young practitioner, a man about 50 years of age called upon me with stricture, who for several years had never passed his urine in a continued stream. His urethra throughout the whole extent felt like a whip-cord; he had not had an erection for years; the pain in passing urine was very great. By careful manipulation I succeeded in passing, at my first essay, a small elastic catheter. A good

deal of pain and suppuration followed, but his stream was increased in size. By increasing the size of the instrument, and introducing it every three or four days, for some weeks, he recovered, and had children afterwards.

I find among my memoranda a few instances which show what difficulties occur in the progress of a case:

Dec. 23, 1847.—Mr. W——, aged 35, called on me with a stricture. He had contracted gonorrhœa in the East Indies; had been treated there and in England for stricture, where he was partially relieved, and again partially relieved in this city, about five years since. The size of the stream had been gradually diminishing since that time; the stream now was a mere thread in size; his general health not very good; tongue furred; ordered a mercurial catheter.

Dec. 25.—Medicine operated well; introduced bougie, No. 6, down to near the membranous portion, where there existed an indurated stricture, plainly perceptible on the application of the finger to the perineum. On using the wax bougie, it presented an irregular bulbous form, but of which little could be learned in regard to the condition of the parts. I made some gentle efforts with a conical bougie, No. 6, without much progress; ordered diet, drink, and parsley-root tea at night.

Dec. 27.—Made similar efforts every other day: changing the curve of the instrument, without much advancement, until

Jan. 17, 1848—when I seemed to get in the right track, and passed the instrument an inch.

Jan. 19.—Some little irritation followed the last introduction; introduced the same instrument into the bladder to-day; it was grasped very firmly by the strictured portion of the urethra, which extended near to the neck of the bladder.

Jan. 21.—Introduced No. 7, and continued every other day to increase the size of the instrument, until

Feb. 20th—No. 14 passed easily. He then used the instrument himself for a few months; has had no return. In this case I found the wax of very little use, as it would not indicate the position of the opening. Hence, we were obliged to rely on gentle, varied, and continued efforts; and where the patient can get his water off, it will be generally found that at each attempt the facility of urinating will be increased, particularly if his diet is regulated and his general health improved, so that the necessity of increasing rapidly the size of the passage is rendered less important. I also find the following case, which, I think, will illustrate some points in the treatment:

Oct. 1, 1840.—Mr. B——, short stature, strong, robust frame, general health good, contracted gonorrhœa five years ago; neglected it for about twelve months; found his stream diminishing in size, and once, after attending a sleighing party, he had retention for twenty-four hours, which was relieved by the catheter. This was three years before he applied to me; since then, he has been under the treatment of several physicians—none having been able to introduce the catheter; and as his stream was getting very small, he placed himself under my care.

Oct. 10.—Found his urine passing in drops, with great pain; every half-hour night and day, ordered mercurial cath., parsley-root tea.

Oct. 12.—Less irritation; medicine has operated well; passed No. 10 to the arch of the pubis, where it stopped; I then introduced the wax, found on it the impression of two small, irregular passages. Continued emollient drinks.

Oct. 13.—Pain in passing his urine rather less; comes away more rapidly. Introduced No. 6; by gentle pressure it

passed about an inch into the strictured part, then it passed suddenly about an inch further. Not being satisfied that the bougie was in the right track, I questioned him very closely, when he told me, reluctantly, that on coming to the city, he had been prevailed on to put himself under the care of a physician at a small town on the road, who, upon introducing the catheter, had given him great pain, which was followed by a free discharge of blood, without affording him any relief. Being now convinced that a false passage was formed, I ordered him a brisk cathartic, emollient drinks, low diet, warm hip-bath, and rest for a few days, to allow the wound to heal. Urine passes—slightly better.

Oct. 22.—Introduced No. 6; passed it a very short distance into the contracted portion.

From the 23d to the 30th, made a slight progress each day. His urine now passes in a stream, but very small; there is considerable discharge of pus, and pain in urinating. Continued the same instrument with varied success each day, and sometimes every second or third day, according to the irritation produced, until

December 15th—when the bougie No. 6 passed into the bladder, increased the size gradually to No. 10; taught him to introduce it himself; discharged him relieved, but not cured, as such cases require many months to be relieved entirely.

I was asked to-day, by a patient, why I did not allow the bougie to remain some time in the urethra, as is generally recommended by surgeons. I answered, that I used to pursue that practice, but from long observation I had found it useless, except in such cases as I shall allude to. It is so much the fashion to treat stricture with caustic, and has been so highly extolled by men of acknowledged skill, that it would seem like egotism to neglect speaking of that plan. In the

early part of my practice, I was constantly in the habit of using either the vegetable or lunar caustic, and even now I should resort to them under certain circumstances. The last time I used caustic was in the following case :

A gentleman, from the West Indies, was sent to me by a physician. He had been several years under his care, with a very irritable indurated stricture, which extended from within an inch of the meatus externus to the membranous portion of the urethra.

May.—He passed his urine in drops, with great pain ; he was greatly debilitated, and the desire to urinate was very frequent. The parts were so irritable that he would not permit me to use sufficient force to introduce the bougie ; I consequently applied the caustic in strong solutions, to allay the irritation of the urethra, allaying as much as possible constitutional irritation at the same time.

May 14.—Has suffered increased pain for a few hours after the caustic was applied. Ordered emollient drinks with Dover's powders.

May 16.—Irritability somewhat allayed ; passed No. 6 about an inch into the contracted part of the urethra. It gave great pain, although but little force was used ; he was so exhausted that he fainted.

May 17.—Applied the caustic again ; some inflammation followed, but it subsided in a few days ; continued the parsley-root tea, with Dover's powders at night.

May 20.—Introduced No. 5 about three inches, but little irritation followed.

May 21.—Injected a solution of nit. of silver ; some pain and irritation followed.

May 22.—Introduced No. 5 about five inches without much pain or irritation. Continued this plan, each time getting the catheter a little further into the urethra, until the

6th of the next month. I got the catheter No. 5 into the bladder; he fainted after the operation, and some inflammation followed; the urine soon flowed pretty freely, and he was greatly relieved. I continued the use of the catheter, gradually increasing the size, for a month; he could then introduce the instrument himself. I directed him to use tonics until his general health was restored.

In these kind of cases, where there is great irritability of the urethra, I have sometimes adopted the plan that I used to see followed by Dupuytren—that is, introducing a conical gum elastic catheter into the urethra, as far as you can, without producing too much irritation, securing it in that position for a few days, until the urine passes around it; then introduce it a little further, and secure it again. And so continue, until you get it into the bladder, allowing it to remain until the urine passes around it.

It has been said, by those advocating the universal use of caustic, that nit. of silver allays the irritation and inflammation. In this I concur; but I find injections of a strong solution of nit. of silver much more efficacious than the application of caustic in substance, inasmuch as the injection acts upon the whole surface of the mucus membrane of the urethra. It is alledged that the injection may reach the bladder, and produce inflammation of that organ; of this there is but little danger, and no evil consequences can possibly arise, as I am constantly in the habit of injecting a very strong solution into that organ, in cases of catarrhal affection, without the least inconvenience, except the pain, which soon subsides.

It would be well to remark here, to persons who are not much in the habit of treating stricture, that they should examine the case very carefully before deciding that stricture exists. I say this, because a great number of cases have come under my care that have been treated for stricture, where the

disease did not exist. A mistake of this kind may arise from a variety of causes, but the most common one is the want of skill in introducing the catheter; there may be some irritability of the urethra, so that it will resist the free passage of the catheter; the urethra may be small, or the instrument may not have the proper curve; the bulbous portion of the urethra may be enlarged, and the catheter may not pass readily into the membranous portion. And I may also remark that not a few cases of stricture are produced by the want of skill in the introduction of the catheter, as the following case will show:

I treated a gentleman for disease of the neck of the bladder, with nocturnal emissions. I introduced into the urethra a large-sized catheter, and injected into the neck of the bladder a solution of nit. of silver on several occasions, and he was relieved.

About twelve months afterwards he called on me, and said that he was sorry that I had not treated him for the right disease. He then informed me that after he went home to a southern climate, his former trouble had returned, and that the physician he had applied to had pronounced his disease to be stricture of the urethra; and that, although he had made many efforts, he had not succeeded in penetrating the stricture. I asked him if he had any difficulty in voiding his urine, or if it was diminished in volume, both of which questions he answered in the negative. I then asked him on what grounds his physician pronounced his case a stricture. He answered, because he could not pass a catheter, and that in the various efforts that had been made to pass it, he had passed a great deal of blood, and as his general health was suffering, he concluded to come north. Upon examination, I found the instrument passed into a false passage, just at the junction of the bulbous and membranous portion, and that the parts were indurated, and the stream lessened in volume.

I soon succeeded in getting into the proper channel ; injected the neck of the bladder, and relieved him.

There is a class of practitioners in our city, I am sorry to say, who are in the habit of pronouncing cases to be stricture, where no stricture exists, for the purpose of increasing their bills, of which quite a number of instances have come to my knowledge.

In some cases of stricture it becomes necessary that the passage should be at once opened. In a few cases of this kind, my son has used chloroform with success. In one case, where the stricture was situated about two inches from the externus meatus, he directed the patient to force the urine down to the strictured part, thus enlarging the urethra. He then, with a spear-pointed stiletto, opened the strictured part.

Stricture sometimes terminates in

FISTULA IN THE PERINÆUM.

When the urethra becomes closed from stricture, and the urine can no longer find a passage through that canal, the urethra gives way, and the urine diffuses itself into the cellular tissue of the perinæum, and being irritating in its character, produces inflammation of that tissue, which terminates either in deposition of coagulable lymph, or in mortification and destruction of the parts. The first of these results—namely, the deposition of coagulable lymph—is an effort of nature to circumscribe the diffusion of the urine, and to force it to an external opening ; this opening may take place either posterior or anterior to the root of the scrotum, or the urine may get into the scrotum itself, depending upon the situation of the stricture. I have had cases of rupture of the urethra when the retention was not complete, arising from continued efforts to urinate ; coagulable lymph was formed around the opening, thus forming an indurated mass, projecting downwards from

the perinæum, and confining the urine within certain limits ; by the timely dilating the urethra, the tumor was removed by absorption. I had not long since a case of this kind. A young man called upon me with a *tumor*, about the size of a pigeon's egg, in the perinæum behind the scrotum. He told me he had very often difficulty in urinating, and about a year ago he had suffered from gonorrhœa, which was very troublesome and protracted. Upon introducing the bougie, I found a stricture just anterior to the tumor ; after the stricture was removed, the tumor subsided. In other somewhat similar cases, I have found the tumor would not subside, and I have been obliged to remove it with the knife.

It sometimes happens that the fistulous openings become clogged up, and the urine finds new passages, particularly when they take place about the origin of the scrotum, and the cellular tissue surrounding the testicle becomes often an indurated mass, as the following, taken from my hospital reports, will show :

CASE No. 1.—I was called on by my friend, Dr. Gist, to see Z. T., a native of Louisiana, about 45 years of age, who presented the following appearance : His scrotum measured twenty-three inches in circumference, was hard, and felt like a scirrhus mass, the two testicles occupied the superior portions of this tumor on each side near their natural situation when the spermatic cord is contracted.

In this tumor at various parts there were nine fistulous openings, discharging a small quantity of urine mixed with pus ; there were two other fistulous openings above the pubis that communicated with the bladder, and one in the perinæum, near the anus, which seemed to discharge more of the urine than any other opening. He had phymosis, and the prepuce was long and pendulous, and this scirrhus hardened mass seemed to embrace the whole urethra, which

was entirely obliterated. It originated from an injury received while riding a wild horse, he being thrown on the pommel of the saddle ; the urethra was ruptured, bled freely, and urine was extravasated, and a fistula followed ; frequent inflammations and retentions of urine took place, which generally relieved themselves by forming new fistulous openings. I directed him to be removed to the hospital, and put upon aperients and alteratives ; his tongue cleaned and his general health improved. Without much expectation of a permanent cure, with the assistance and advice of my friend, Dr. Gist, and in the presence of several physicians, we made the following operation on the 28th of June :

With a large scalpel I made two flaps very similar to those made in the flap operation of the thigh, leaving a testicle in each flap ; the two incisions meeting at the original situation of the urethra, which made a clear amputation of the tumor ; then introducing the catheter about an inch into the urethra, where it stopped, the urethra being obliterated ; I then continued my incision up to the catheter, which, however, was but a short distance, the base of the tumor occupying the greater portion of the penis. After trimming out all the scirrhus portions from the original position of the urethra, I brought down the catheter to the perinæum, making an external incision. as in Lithotomy. I then carried the bistoury into the bladder, being guided principally by my finger in the rectum, a part of the operation that I found very difficult. I then passed the catheter into the bladder, and a small quantity of urine passed, which satisfied me that I was near the proper track. After trimming and arranging the parts, I brought the flaps and perinæum together, with the interrupted sutures, and allowed the catheter to remain ; there was no vessel that required a ligature ; the tumor was a scirrhus mass of indu-

rated cellular tissue, such as I have often seen around fistulous openings in the perinæum. He took

℞. Gum. Opii. grs. ij.
Blue Mass, grs. xxx.

On the next day, there was much pain and tenderness over the pubis, a furred tongue, and the urine was loaded with pus; the inflammation run very high, which, however, subsided in a few days. His treatment consisted mainly of mercurial cathartics and warm applications to the parts. In twenty days I removed the catheter and introduced another, but not without difficulty; the flaps were nearly united; there was, however, a considerable opening in the seat of the old fistula in the perinæum.

After some weeks I made an incision some distance into the perinæum, and removed some portions of the surrounding scirrhus, and brought the skin together with a suture; it did not, however, heal until about eight months after, for occasionally some accident would happen that his catheter would get out of the bladder, and the urine would pass in small quantities through the fistula; it, however, after various treatments, at the expiration of about twelve months, healed entirely, and he gradually began to go without his catheter; at first he could not do without it for more than a few hours at a time, as the urethra would contract, but eventually he laid it entirely aside, and is now perfectly sound, eighteen months after the operation.

CASE No. 2.—Entered, Friday, November 1st, 1833, Joseph Knapp, aged 34, carpenter by trade, a native of New York, of intemperate habits. He had fallen astride the side of a flat boat, about two years since, after which he had a retention of urine, with discharge of blood; he, however, made out to

get his water off for some days. When it stopped entirely, a catheter was introduced with difficulty, and some water passed; he had a retention soon again, which terminated in fistula, and whenever the fistula would close, he would get into intemperate habits, expose himself, and would be again attacked with retention; a new abscess would form, which would soon terminate in fistula. A number of attacks of this kind occurred between the time of the accident and his admission into the hospital, at which time he was in the following condition: He passed his water in drops; there was an abscess in the perinæum with the parts around it, indurated and scirrhus with the remains of old fistulas. Finding it impossible to pass a catheter into the bladder, Dr. Goldsmith opened the abscess, which discharged a large quantity of urinous pus; through this opening the urine continued to discharge, until November 6th, when Dr. Goldsmith performed the following operation before the medical class: He passed a staff two and a half inches into the urethra, then turning up the scrotum, he made an incision down to the staff, and along the course of the urethra, then extended it to the left of the raphe, as in Lithotomy, and followed the incision with the staff. With the director and bistoury, he then opened a tortuous canal of the remains of the urethra, until he arrived at the prostate gland, and after some exertion and force, taking care to keep the finger in the anus, he passed the staff into the bladder. He then withdrew the staff, which was firmly grasped by the neck of the bladder, and it required considerable force to withdraw it, and introduced into its place a gum elastic catheter, which was allowed to remain, the urine flowing freely through it. He was ordered

R. Blue Mass, grs. xx.
Gum Opii, grs. j.

November 7.—His tongue was a little furred, and skin hot; pulse 110. Medicine had not operated. Ordered

Oli. Rici, ʒj.

November 8.—About as yesterday—the wound suppurating.

In a day or two the inflammation subsided, and his tongue cleaned. About a week after, the catheter slipped out at night, and the urine passed by the perinæum; it was introduced with great difficulty, and considerable inflammation followed its introduction, which, however, soon subsided, and the urine continued to pass by the catheter.

On the 8th of December, the catheter was withdrawn, the wound was healed, and on the 16th he was discharged perfectly well.

CASE No. 3.—A Mr. S., aged 45, of sanguine temperament, applied to me, July 10th, with a tumor extending from the left groin to the tuberosity of the ischium, including the perinæum. Upon examination, I found that about two years since, while at New Orleans, he had contracted syphilis; the chancre had become phagedenic, and the glans penis had sloughed away, and when he recovered, the orifice of the urethra was left very small, and indurated some distance within the urethra.

Since that time, he has often suffered from retention of urine, and has never passed his urine well. About three months since he discovered the tumor, which has gradually enlarged to its present size, and has been extremely painful; and at the same time, his difficulty of urinating has been gradually increasing.

I soon found that it was a urinary abscess. I attempted to introduce the catheter, but found it impossible, the instru-

ment always finding its own way into the sac, which extended from near the left groin to the membranous part of the urethra. I, however, kept the catheter in the sac for a few days, until I got his general health a little improved. I then made an incision into it, two inches in length, and evacuated its contents, which were urinated pus, with detached portions of the cellular tissue.

I then discovered that the urethra communicated with this sac near its orifice, or within an inch and a half it, and I could trace the urethra with my finger from this opening down to the membranous portion. After much difficulty, with the assistance of my finger in the sac, I got a small litho-staff into the urethra, and finally succeeded in getting it advanced to the membranous portion, but could get it no farther. I then laid the whole urethra open into the sac as far as I had progressed with the staff, but finding that I could not get the staff into the bladder, I continued my incision, following it up with the staff in the direction of the urethra, until I reached the prostate gland, when the staff passed into the bladder. With some difficulty I removed it, and substituted a silver catheter, and his urine passed freely. I kept this catheter in the urethra two weeks, when it was removed, and a flexible one introduced in its place. There was no important vessel cut, and but little inflammation followed. Notwithstanding the rough manipulation and great pain attendant on so tedious and troublesome an operation, in five weeks he withdrew the catheter, and has entirely recovered, having a fine stream and no difficulties in urinating.

LITHOTRIPSY ;

OR, THE

BREAKING OF STONE IN THE BLADDER.

HISTORY OF THE OPERATION.

THE extraction of stone from the bladder through the urethra seems to have been thought of, and even practiced in certain cases, in the remotest periods of which we have any reliable records. The Egyptians were in the habit of dilating the urethra, and then by suddenly expelling the fluids in the bladder, force the stone into the urethra, whence by manipulation it was withdrawn. The Arabs performed the same operation, with the addition that they used instruments to withdraw the stone from the urethra. These operations were applicable only to those cases in which the stone was small. LITHOTOMY, after the institution of these operations, was uniformly adopted, although the attention of the older surgeons seems always to have been directed to the feasibility of breaking up calculi. As early as 1519, Alsaharavius speaks of an instrument for breaking friable stones. The instrument used by Sanctorius, about 1626, was a three-branched one, so constructed that the stone, when grasped by its prongs, should be withdrawn with it. This instrument does not seem to have been intended for any other cases than those in which the stone was small, and differed from those used by the Arabian surgeons only in this, that it seized the calculus *in the bladder*, in place of *the urethra*. It is more than probable, however, that this was the first

straight instrument introduced into the bladder; unless, indeed, we attach credence to the account given of straight instruments found in the officina of the surgeons in the excavated ruins of Herculaneum and Pompeii. The very first instance on record of the comminution of a urinary calculus in the bladder, is that in which a monk of the order of Citeaux, in his own case, used a stilet, passed into the bladder through a canula, and armed with a chisel-shaped termination. He broke up the stone by directing the point of this instrument against it, and striking on the stilet with a small hammer.

The next case is that of Col. Martin, a French officer in India, who introduced a curve sound, the convex-surface of which was rough like a file; and catching the stone at the neck of the bladder, he gradually destroyed it. In 1801, Dr. Darwin, in his *Zoonomia*, suggested an instrument based upon that used by Colonel Martin. In 1813, a Bavarian physician, Dr. Greishuisen, published a description of some instruments intended to comminute stones in the urinary bladder, though his principal object seems to have been to facilitate the application of some solvents. These were—first, a tube for directing the solvent fluid directly upon the stone. Second, a tube with a trepan enclosed to perforate the stone, so as to present as large a surface as possible to the action of the dissolving agent. Third, a tube enclosing a loop of wire to grasp the stone, and a lance-shaped wire within to break it. And fourth, what he called his stone-cutter, which consisted of two blades within the tube, so arranged as to cut the stone as they were withdrawn. Mr. Elderton, an English surgeon, proposed an instrument in 1819, but it was curved, and therefore considered inapplicable. Up to this date, we have no evidence of cures having been effected by breaking the stone in the bladder, except in the

two instances of the monk of Citeaux and Colonel Martin, although a vast number of instruments were projected.

The history of surgery no where presents the unsuccessful exercise of so much ingenuity; and nothing could have enlisted such untiring zeal, but the magnitude of the good to be effected by the successful issue which their labors had in view. Useful surgical instruments are those which are simple in their construction, and have a plain and definite office to perform. But the operation of lithotripsy is so complex, and in its performance there are so many indications to be fulfilled, that an instrument to meet them must necessarily be one of rare ingenuity.

“Lithotripsy is not now, nor ever will be, we are sure, a process consisting of, or depending upon, the use of one instrument or apparatus; otherwise its resources would be scanty indeed. Its proper performance depends upon the several instruments and apparatuses, combining together for the desired result, varied and modified at the moment, according to the emergency of the case. The lithotriptic apparatus must have a quadruple object in view: to avoid giving pain—to ascertain the size and form of the bladder and stone—to grasp and reduce the latter to atoms—and to combine with the very act of comminution the faculty of safety and rapidity in bringing away the calculus. Nor is it less important to place the patient in a convenient position to the operator and himself, during the application of the remedy. This is found very simple, easy, and rapid, by a competent person: but, as we have said before, it is a study that, in its present state, requires a nearly exclusive attention, and to perfect it, persons particularly gifted with mechanical genius, manual dexterity and tact, as well as anatomical and surgical knowledge.”

The above remarks we copy from Belinaye's Compendium

to which we are indebted for much of the history of that science. We cannot forbear giving the following passage from M. Sanchou, published in 1830:

“From the descriptions given of the process of lithotripsy, it appears so simple and easy that there is no patient who does not feel inclined to be operated upon, nor a medical man who does not think himself capable of performing the operation. Hence the number of instruments which have been sent, some into the provinces, some abroad; thence, also, the numerous attempts which have been made—the numerous errors which have been committed, even by surgeons, and men of great merit: for it deserves remark, that almost all the chief surgeons of the Parisian hospitals have tried lithotripsy, and that all have failed; which proves that this operation is not so easy as one imagines. Within three years, more than six thousand apparatuses of lithotripsy have been sent from Paris; as much to the provinces as to foreign countries; and, however, a few instances of success only are known.

“To perform this operation, besides cleverness and address, a great deal of practice is required, which is obtained only with time, and by handling unceasingly the instruments which are intended for it. The working of these is so difficult, although apparently very simple, that one ought almost to have made them oneself to know them well; or to identify oneself so much with them, that the fingers convey themselves unaided upon the point which it is necessary to set in motion during the operation.

“So marvelous is the dexterity of some few persons who have devoted themselves exclusively to lithotripsy, that we would of all things refrain from judging of the value of their apparatus by their own success. In their hands it would appear that every instrument would achieve a triumph; and if,

independent of the success of the inventor, we did not find that the instruments we shall laud at a future chapter of this work, had not inherent qualities, we should not have praised them so fervently."

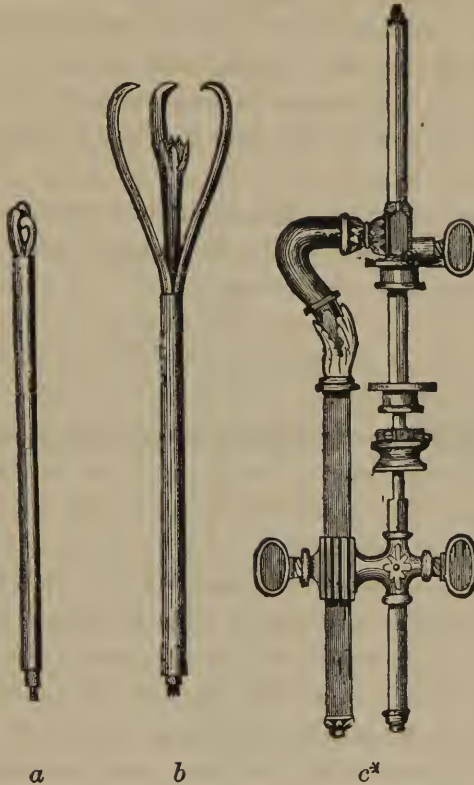
We come now to the year 1822, when such a degree of perfection was attained in the construction of instruments, that it was thought they might be applied successfully to the treatment of stone, though still only in cases where the calculus was small and soft. In this year, Amussat presented an instrument nearly similar to the "stone-cutter" of Gruithusen, differing from that instrument in this, that it was intended to crush in place of cutting the stone. M. Le Roy at the same time constructed an instrument, based also upon a suggestion of Gruithusen, so arranged as to consist of a tube enclosing two watch springs, which, being opened in the bladder, were intended to enclose the stone and hold it, so that the trephine could be applied to break it down. In connection with this was also used the winch, which is seen in the plate of Civiale's instrument, so as to allow of the use of a bow in drilling. But the most useful improvement made by M. Le Roy, was the application of the three-branched bullet extractor of Alphonse Ferri. This forceps, with the addition of the rod of his own construction, and the winch, used with his other instrument, is almost identical with that of Civiale. Great credit is due to this latter distinguished surgeon; and we speak within bounds when we say, that he has done more than any other man to make the operation of lithotripsy practicable.

Much has been said, calculated to deprive him of his well-earned reputation; but, although he may have borrowed ideas (and what inventor has not?), yet, for his great dexterity and untiring perseverance, he is justly entitled to be called the father of the operation.

Civiale's instrument, which was first applied in 1824, dif-

ferred from the instrument of Le Roy in this: the rod had a crown-shaped termination larger than the rod itself, and therefore destroyed the stone more rapidly; and it had, in addition, a screw near the handle, by which, when the forceps had grasped the stone, it was fixed and held in position.

CIVIALE'S INSTRUMENT.



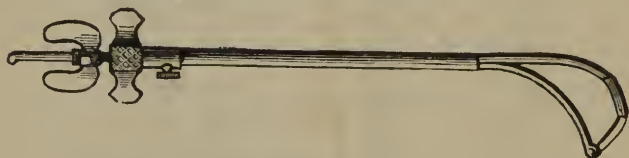
I have used this instrument, and found it well adapted to some cases. Civiale himself has applied it successfully in a great many instances: but there are some objections to its

* *a.* Closed. *b.* Open. *c.* Winch.

use, which are more readily understood by those who have used it, than they can be explained. It is more complicated, and is not easily introduced into the bladder in some cases. It is important that as little pain as possible should be given at each operation. There are some stones that it will not grasp readily; and I think its use is more apt to bring on inflammatory symptoms than the *percuteur*. Nevertheless, I have seen *Civiale* use it with such dexterity and success, that I was unwilling myself, for a good while, to give it up. However, I have latterly abandoned it for one or the other of the following instruments, using each as I find it adapted to the case.

I now use *Jacobson's* instrument, or that of *Baron Heurteloup*. *Jacobson's* is applicable in children, or to those adults in which the stone is small.

JACOBSON'S INSTRUMENT.



But the instrument which is most universally applicable, is that of *Baron Heurteloup*. This instrument is simple in its construction; it is easily introduced, and can be carried with great facility into almost any part of the bladder. It can be made to grasp stones of any shape and almost any size; and when the stone is soft, it may be broken by the pressure of the hand; or when it is hard, the hammer can be used. Any stone will yield to this force, when the blows are struck in quick succession for a length of time. When the stone is broken, small pieces are often brought away in the instrument; though this is hardly necessary, for the bladder

will generally expel every particle that is small enough to pass through the urethra; and here I may remark, so well do patients know the presence of stone, that they will tell you when the last piece comes away.

HEURTELOUP'S PERCUTEUR.



I have thus given a brief and concise statement of the principal instruments which have been concerned, and are used in the operation of lithotripsy. It might be interesting,
10

but it certainly would be useless, to recount the different modifications of Civiale's and Heurteloup's instruments, made by themselves and their followers; for I have never yet found a case which admitted of the use of lithotriptic instruments, in which one of the three which are figured might not be employed, and that with greater advantage than any other instruments which have been invented. They are the simplest—cover the whole series of cases in which lithotripsy is applicable—are the most easily used, and are in every respect the best.

There are a few important points to which I must call attention, connected with the operation for lithotripsy, and all the rest depends upon the powers of manipulation.

In the early part of my professional life, I was associated with Dr. Ephraim McDowell, of Kentucky, one of the best and most successful operators, especially for stone, that I ever knew; and I found that his success was mainly owing to the fact, that he was always unwilling to perform any important operation until he had satisfied himself that the general health of the patient was in as good a condition as it could be made under the circumstances; that all the secretory and excretory organs were performing their functions with regularity—in this way lessening the liabilities to irritation and inflammation, during and after the operation; and thus I was taught a most important lesson, that has been of great service to me through a long and arduous practice; and in no operation is this more important than in the one under consideration.

It is also very important to ascertain the condition of the bladder. In some persons the irritability and tenderness of this organ is so great, that it will not bear the necessary manipulations, and the operation is sometimes impracticable on that account. This will depend very much on the duration of the disease, and on natural irritability of the patient. For

the purpose of allaying this, and restoring the bladder to a more healthy condition, I have found it not only necessary to address remedies to the general health, but also to the local disease—such as warm hip-baths, diluent drinks, anodyne enemas, and the frequent introduction of a large-sized bougie; and by the use of the latter you will learn the habits of the stone, for it will be found that some stones will habitually occupy particular parts of the bladder; while others, again, will change their position frequently, and as it is very important to be able to grasp the stone quickly, you will be much aided by this knowledge.

In the next place, great care should be taken not to do too much at one time. I generally introduce my instrument, and if I grasp the stone easily, I break it; if I do not find it quickly, I postpone it until another day—particularly in the early part of the treatment; for it will be found that the bladder will bear much more towards the termination of the case than it will at first; therefore, in the two first essays, I never break it more than once; whereas, in the later ones, I often break it three or four times, but I never attempt to break it if there is any irritation or inflammation remaining from a former essay.

C A S E S

IN ILLUSTRATION OF THE APPLICATION OF LITHOTRIPSY.

I wish now to call the attention of the reader to the applicability of lithotripsy to the cure of stone, and the safety of the operation. I give the following cases, for the purpose of showing what kind are, and what are not, within the reach of lithotripsy:

CASE 1.—Mr. M., 35 years of age, a native of Louisiana, applied to me, with all the symptoms of stone, under which he

had been laboring for about three years. He was generally confined to bed once a month, for two or three days, with fever, pain over the region of the pubis, scalding urine, constant desire to urinate, &c. I sounded him, and found a stone about an inch in diameter. Next day he had an aggravated attack, which lasted for a week. I put him upon aperients and diluent drinks for two weeks. Having thus allayed the irritation, I passed the percuter, grasped the stone, but did not break it. I waited two or three days, and finding no increased irritation, I introduced the instrument, and grasped and broke the stone.

He passed several small pieces of an uric acid calculus. In three days I again introduced the percuter, and broke the stone a second time without his complaining of any pain. I finished the case at three more sittings, two days intervening, and on the twelfth day he told me he was entirely relieved. He did not complain of pain at the sittings, and walked about as usual during the intervals. I sounded him, and found that all the stone was removed. I could detail several similar cases; but this will give a correct idea of an ordinary case that has not been of very long standing.

CASE 2.—Mr. G., aged 30, a clerk in a store in Pearl-street, called on me, and informed me that about a year ago he had an attack of inflammation of the kidneys, which had confined him to his bed for several days, and that it had been subdued by active depleting remedies. I asked him if the pains had been in his groin and around the abdomen. He said that they had, and were very violent. Since that time, he had occasionally suffered from pain in passing his urine, and latterly he had seen a glairy mucus in his urine, and had been troubled with frequent desire to urinate. I introduced a percuter,

and grasped and broke a small stone. It passed out that day, and he has not been troubled since.

CASE 3.—Mr. R., aged 20 years, a resident of this city, had suffered from symptoms of stone for eight or nine years, called in Nov. 1842. I sounded, and found a stone with difficulty; upon sounding frequently afterwards (which I am in the habit of doing when there is any obscurity), I discovered that the stone was in a cavity of the bladder, which contained no urine, so that when I wanted to inject the bladder, or draw off the urine, I had to pass the catheter further into the bladder, and through a different opening from that communicating with the stone. I also found that the catheter rarely touched the stone. There was but one testicle in the scrotum, and that was fully developed; therefore, I concluded that the other, instead of passing out of the ring, might have fallen upon the bladder, and produced some irregularity in the shape and muscular contraction of that organ, which modified its functions and form; for there seemed to be two cavities, one up behind the pubis, containing the stone, and the other lower down and further back, containing the urine, with a kind of hour-glass contraction between them. I might here observe, that this case had been seen and sounded by several distinguished professional men, and had been placed on the table for lithotomy by one of them; but owing to some uncertainty as to the existence of the stone, the operation was postponed. After a series of efforts, and having prepared instruments of different shapes and lengths, I succeeded in grasping and breaking the stone. I made, in all, four or five unsuccessful efforts, and three successful ones. After the last, all the remaining parts of the stone came away. One piece was very large.

This calculus was of the Mulberry species, very hard,

and about an inch in one diameter, and a half inch in the other. Two very great difficulties presented themselves in this case: one was the stone being in a cavity without a fluid surrounding it, and in contact with the bladder, or sack containing it, which made it very difficult to get the instrument around it; yet by very careful manipulation, I accomplished it without producing any perceptible inflammation. The other difficulty was the stone, requiring an instrument of longer grasp: this rendered the operation still more difficult.

CASE 4.—Mr. B., aged 48, a shoemaker, has been troubled for 8 or 9 years with difficulty in passing his urine, and other symptoms of stone. He has been under the treatment of a variety of quacks, for a variety of diseases. Upon sounding, I found a large stone and great irritability of the bladder; it was contracted so close to the stone, that he could not retain his urine longer than a few minutes. I could not inject more than a half-gill of water into it. He was very much emaciated, and his urine contained a large quantity of mucopurulent matter. Upon introducing the percuter, I found that the stone was so large, and the space between it and the bladder so small, that it required very careful manipulation to grasp it. I succeeded in getting hold of the side of it, and breaking a portion of it off. The stone was two inches in its longest diameter. It required twenty essays to remove it entirely; but each time the patient was better, and his general health improved. He came every other day a mile to be operated on, and no essay was more painful than the ordinary passage of his urine. His general health is entirely restored, his bladder has assumed its natural functions, and he is now working at his trade.

CASE 5.—Mr. A., aged 89, had been suffering from an affec-

tion of his bladder and kidneys for forty years. I sounded him, and found the prostate gland very much enlarged, the bladder thickened, the third prostate, as it is called, was enlarged, and had been perforated by a catheter; so that when the instrument was passed through that canal into the bladder, it could not be moved about with any freedom; but I found that by moving the point of the instrument carefully to one side, before entering the bladder, I could feel several stones. There was a stricture two and a half inches from the glans-penis, which would not admit an instrument larger than No. 6. I dilated the stricture in about two weeks' time, so that I could introduce No. 10. With this I broke one stone, and the same day a very considerable quantity of detritus passed. In ten or twelve days I broke up the remaining calculi. There was some difficulty in the passage of a few of the larger fragments through the strictured portions of the urethra; but these, with a little assistance, were extracted, and he was relieved. Very little pain and no inflammation followed any of the essays, and at each he came regularly to my office, attending in the intervals to his usual avocations.

CASE 6.—Mr. G. brought his son, aged 6 years, to me. He had suffered from symptoms of stone from his birth. I sounded him, and found one. His health otherwise was good. I placed this boy upon a table, which I use in performing this operation upon children, bound him firmly to it, and in three essays broke the stone, so that its detritus passed through with a great deal of pain. After the stone was broken, he was in greater pain until the detritus passed than he was before the operation. I have observed that in children, as soon as the stone is broken, the efforts of the bladder to expel its fragments are so great, as to lead to the belief that inflamma-

tion of the bladder has been produced. However, the pain is ended as soon as the fragments all pass away.

I could detail here a number of other cases, but I have already given some of the best and most easy of management, and likewise some of the worst, and such as presented the greatest obstacles to the performance of the operation. Some of these cases occurred in this city, and were seen during the whole progress of their treatment by several of our most eminent surgeons. I should be most happy to afford an opportunity to any who are desirous of satisfying themselves by personal knowledge of the efficacy of the treatment in these cases. This would give an additional pleasure from the fact that some surgeons have doubted the practicability of the operation.

CASE 7.—There are, on the other hand, some cases where lithotripsy cannot be applied. I will detail one :

Mr. L., from an unhealthy district in Georgia, brought a son of his, aged four years, to this city, to place him under my charge for the performance of lithotripsy. The child had suffered very seriously in his health, from the fevers in his locality. He was the subject of occasional epileptic convulsions. I sounded him, and after several unsuccessful efforts, I grasped and broke a stone. A good deal of broken calculus passed away, and in a few days he was seized with convulsions. These were so severe, that he did not recover from their effects for several weeks. They did not seem, however, to have any direct connection with the disease or the operation. After a few more unsuccessful essays, I broke the stone again. Soon after this he had another fit, from which he was a long time in recovering. He, however, rallied from this, but only to be attacked by inflammation of the bowels. He got over this, but his pain in urinating became so distress-

ing, and his general health seemed giving away so fast, that I determined to cut him. I performed the operation, and found two large stones entire, and a third one broken, but in pieces too large to pass. I had great difficulty in saving this patient; there was so much constitutional debility, that hectic fever set in: the wound looked flabby, and gaped open. He, however, recovered under the use of stimulant and tonic treatment. I am unable to detail all the difficulties in this case in the order and succession that they presented themselves, for it was a long time on hand, and I kept no notes of it; but there were two which were very serious: one was, that whenever I introduced the instrument, or a piece of stone attempted to pass the urethra, the penis became erect. This, of course, added to the pain of every passage, either of the instrument or of a fragment. Another was, that he had the power of emptying the bladder alongside of the instrument when introduced, making it very difficult to grasp the stone. The urethra was so small that I had to use Jacobson's instrument.

CASE 8.—Mr. C., aged 50, applied, with all the symptoms of stone. He was so much debilitated that he could not walk. He had a cough, with muco-purulent expectoration. The discharge from the bladder contained more pus than urine. This viscus was so irritable that he could scarcely bear the presence of a sound. I endeavored to allay his irritability and improve his general health, but I could not succeed. He prevailed upon me to cut him, which I did, after my telling him that there was not more than one chance in a hundred of success. He chose to take that chance. I extracted a large stone in a very short time, without the loss of much blood. But his system could not re-act, and he died on the third day after the operation.

CASE 9.—A gentleman of this city applied to me, with symptoms of stone in the bladder. I found him in bed, with all the symptoms of this disease, together with constant pain and weakness in the back, which prevented his walking or sitting up.

He had been under the charge of several surgeons, one of whom came prepared to cut the stone out; but, upon introducing the director, could not find the stone, and desisted from the operation. One of the surgeons had attempted lithotripsy, but could not seize the stone, and much pain and irritation followed. Upon sounding, and afterwards operating, I found a large stone, with what I supposed some smaller ones; he passed in the course of the day a considerable quantity of stone, and no pain or irritation followed. In two days I operated again with the same result. I continued to operate every day, until I had operated seven or eight times, doing but little each time, for fear of producing irritation, which might extend to the kidneys, as they were evidently in a diseased condition. Some irritation followed about this time, which, however, soon subsided; and as the pain of passing the urine, and the other symptoms, had been gradually subsiding, I hoped that it all was removed; but after about two weeks, he sent me word that the symptoms had returned; I then continued to operate once a week, until I had operated ten or fifteen times, removing, as I believe, several stones—at least four or five; his relief was instantaneous, when the last piece passed. He went to London soon after, and was treated for his disease of the kidneys, and writes me that he has entirely recovered his health.

ANOTHER CASE.—A clergyman of New Jersey, from whom I took a very large stone some ten or twelve years ago, came

to me, with symptoms of stone ; upon examination, I found a stone about the size of a boy's playing-marble ; broke it at two operations, without pain or irritation.

I could give other cases, in which I have cut for stone, since I have practiced lithotripsy, but I think, and I believe I can advance testimony to bear me out in the assertion that, with my present knowledge and experience with the instrument, there are few cases in which I cannot break the stone. I base this declaration upon what is well known, an extensive experience in the treatment of calculous affections.

From the results of these cases, it may be stated :

1st. That every person laboring under stone can be cured without risk of life, provided they apply at an early stage of the disease, and in the case of young children, when they have not more than one stone.

2d. That lithotripsy, as at present practiced, does away, to a great extent, with a bloody and (in all cases) dangerous operation.

3d. That it gives but little pain, and does not interfere with the avocations of the patient. It is certainly beyond dispute that it is a great improvement in surgery, giving easy relief to a large class of patients, who have heretofore been doomed to linger out a life filled with torture, or submit to the hazardous ordeal of lithotomy.

SEMINAL WEAKNESS

Is a subject that we approach with hesitation, but it is fraught with so much misery to the human family, that we feel constrained to give what little we know on the subject; it is also a branch of our profession, in which quackery runs riot, and leads to a great deal of misery. It may arise from a variety of causes, but its most common source is onanism; a long continuance of this habit debilitates the general organs, impairs the general health, the nervous system becomes deranged, and melancholy and a host of other diseases follow. Few persons are aware of the extent to which this habit of self-pollution exists in our country, but long observation has taught me to believe that it ranks among the most potent causes of ill health in our rising generation, especially in cities, and the chronic diseases to which it gives rise are almost innumerable. I will mention a few of them:

As the venereal act gives rise to a marked congestion of blood to the head, we may naturally infer that when a person is predisposed to apoplexy, that any venereal excess would be likely to bring on an attack of this affection.

I had under my care a gentleman, about 40 years of age, who had suffered from seminal weakness, with nocturnal discharges, the result of masturbation. He informed me that he suffered from pain in the back part of his head, and great prostration when he indulged in this habit, which he found it almost impossible to avoid. One night I was called to see him, in great haste. I found him insensible, with stertorous breathing, and violent priapism, which continued until he died. Upon opening the cranium, I found the brain suffused

with blood, especially the cerebellum. Tissot, Serres, Penel, Cruveilhier, and Hoffman, all detail similar cases. Chronic lesions, alteratives, tumors, &c., have terminated the lives of onanists. Desruelies cites a case where there was paralysis of the right arm, convulsions of the left, and of the muscles of the face. On opening the cadaver an incysted abscess was found in the hemisphere of the brain. Gall gives an account of a boy addicted to this habit, whose cerebellum was found in a state of suppuration.

Campbelle gives a case where the entire cerebellum was absent, and in its place there was a gelatiniform membrane attached to the medulla oblongata.

Of all the diseases that have their origin in self-abuse perhaps none is more common than epilepsy. The ancients considered the act of coition a sort of epileptic fit, and some persons, especially females, are insensible for some minutes after the act.

I was consulted by the parents of a boy, about 14 years of age, who had been subject to this affection for more than a year. I found that the attacks generally occurred after he had retired to bed. His parents had discovered that his linen was very much stained, which induced them to consult me. He eventually acknowledged the habit of onanism. After a year or two of treatment, change of air and circumstances, and the incessant watchfulness of a pious and kind mother, he finally recovered.

Two other cases, somewhat similar, have come under my observation. One proved fatal, the other had partially recovered. Similar cases may be found recorded by Esquirol, Zimmermann, and Goupil. Lauret states that out of 106 patients with epilepsy, 12 were caused by onanism.

I have treated quite a number of cases of chorea in young girls, produced by this habit of friction of the clitoris. Not long

since, I was consulted by the parents of a girl, about 11 years of age, who was at boarding-school (where I find this habit is mostly contracted). After investigating the case, I felt but little doubt as to the cause of the disease. The child was taken home, and closely watched, and the habit was soon discovered. I treated her with cold bath, tonics, change of air, &c.. and she got over the chorea.

In the early part of my professional life, I had under my care a case of chorea, produced by this habit, and, although by tonic and other remedies she was relieved of the chorea, yet it seemed impossible to break her of this horrible habit. She would steal away from her nurse, and use the friction. I applied bandages, but she would manage to get them loose. I cauterized the vulva without effect; I then excised the clitoris, but it did not afford permanent relief. Her parents then took her to Europe, and she gradually, as she grew older, overcame it by her own resolution. She was a child of fine intellect.

Cases have come under my care, where nurses have resorted to friction of the clitoris for the purpose of quieting children, and thus established this horrid habit. Dementia is the form of mental alienation that this unfortunate habit leads to. We could detail several melancholy instances that have come under our own observation. Diseases of the medulla spinalis, and cases of the spinal column, marasmus, with pulmonary consumption, and almost all the diseases of debility, have been attributed to this habit; but it will be generally found that the predisposition had already existed, and that masturbation was only the exciting cause; otherwise the amount of disease in the human family would be greatly increased.

Excessive venery after marriage, in persons of nervous temperament, often produces seminal weakness. Several times

I have been consulted by persons coming to this city from the interior upon a marriage excursion; some cases seemed to have arisen more from nervous apprehension, than any thing else; rest and abstinence generally restored these kind of cases.

Some have complained of their inability to procure erections so as to perform the marital act; others, that the discharge of semen comes before copulation can be accomplished; others, that both the erections and discharges are imperfect, and require a long time to accomplish the act. Most of these kind of cases will be found to have been caused by self-pollution. Some of my patients have attributed their difficulties to long-ungratified excitement.

Another painful cause of this disease is gonorrhœa, where the disease has been of long standing, and has affected the whole urethra, or extended into the bladder. It is very apt to leave behind a gleet discharge, with which semen is generally combined, ending in weakness of the genital organs. Stricture and diseases of the kidneys sometimes cause weakness of the genital organs.

It assumes, also, a considerable variety of *symptoms*. In some it affects the general health almost immediately. The patients become desponding, and disposed to retire from society. They become pale and emaciated, extremely nervous, and easily agitated. In others, the trouble is local, and seems to be confined to the genital organs only. Gentlemen have frequently called on me, in apparently perfect health, who wished to marry, but expressed a fear that they would not be able to perform marital duty. They often complain of being subject to involuntary discharges, which caused great debility of the genital organs. Some persons are naturally defective in genital power, and in these cases the external organs are frequently imperfectly developed. The penis will be small,

the prepuce very long, so that the glans cannot be uncovered. In other cases, the external meatus is naturally low down on the under side of the penis, and, most likely, there will be a fissure in the gland, with scarcely any prepuce—approaching, according to St. Hilliare, the female sex.

A few cases have come under my observation where the external organs were not much under the ordinary size, yet the desire for coition had scarcely manifested itself. One remarkable case of this kind came to consult me: he said his friends wished him to marry, but that he had never experienced the same desires that others had described. He was a pious young man, had lived a very retired, laborious life in endeavoring to support a widowed mother. His diet was almost entirely milk and bread, and in the early part of his life he had lived exclusively on milk.

I once had a case of a young man, about 18 years of age, whose right parietal-bone was fractured near its posterior part. He was a morose, quarrelsome fellow, with strong passions. Upon removing a portion of the cranium, I found the dura mater ruptured, and a portion of the brain exuded, and, at periods during the process of cure, a quantity of the brain passed out of the wound, but he eventually recovered, and his whole character changed. He became pious and gentle in his disposition, and he told me that his venereal passions scarcely existed, although almost uncontrollable before the injury, which had, in fact, led to the quarrel in which the wound was inflicted.

The following case was published by my friend and pupil, Dr. Donne, of Louisville, and illustrates the intimate connection between the posterior portion of the brain and the genital organs:

“Mr. S——, an athletic laborer, aged 25, apparently of crofulous diathæsis, temperament phlegmatic, not addicted

to habits of intemperance, received a wound from a rifle-ball, which penetrated the parietes of the cranium, immediately in the postero-superior angle of the parietal-bone, a few lines from the lamdoidal suture, and passed in a direction latterally downwards and backwards, without making egress on the opposite side. An aperient state of the bowels, light dressings, and elevated posture, were recommended, in conjunction with warm applications and frictions to the extremities, which were cold. As no hopes, under circumstances, could be rationally entertained, the attendant physician was compelled to resign the patient to his fate. Reaction was not established until about the third day after the injury; and its development was attended with inflammatory symptoms, which, as they progressed, appeared to direct a peculiar sympathetic influence to the genital organs. On the fourth day the dressings were resumed, large quantities of cerebral matter discharged, pulse more active: ordered mercurial cathartic, which acted well. Fifth day, expressed a desire for food; gruel given him; ate a small quantity, which was quite palatable. Priapism supervened in the evening, with delirium: ordered cold applications to the head, saline purgative; patient not so restless, purge acted well; rational next day on every subject but that pertaining to venery. Sixth day, more delirious; obliged to exclude the female attendant from the apartment. Seventh day, very restless; language very obscene, and somewhat incoherent; bowels open, discharges apparently healthy; expressed a desire for food; ate some panada. Eighth day, in a soporose condition, evincing still when roused a salacious disposition; priapism still continues. In this situation he survived nine days, apparently rational on every subject, save the one already alluded to; nor was there the slightest abatement of the priapism, until a few moments previous to his death."

I could cite quite a number of interesting cases of this kind, but it is not my object in this little book to enter much into the discussion of any subject, but simply to give, in a concise manner, some of the results of my own observations.

When gonorrhœa has been neglected, badly managed, or protracted in scrofulous or debilitated constitutions, especially if the person indulges in masturbation, it generally assumes a chronic or gleet form, and involuntary discharges of semen is a common consecutive. I have frequently had cases of patients who, after a violent gonorrhœa that had extended to the bladder, have lost, for a time, all sexual desire.

In all cases, where the genital organs are in a diseased condition from selfabuse, the moral and hygienic

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are of the first importance. Hence, if you are not able to impress upon your patient the necessity of self-control, you must resort to forcible means. I have had many cases under my care of a most melancholy character, when patients were perfectly reckless, having no control over themselves, or allowing any one else to influence them. Others, again, mourning over their inability to control themselves, would meekly submit to all sorts of mechanical means for restraint. Cases similar to the following are of common occurrence, and show the plan of treatment I have generally adopted :

A boy, about 16, was brought to me. It was observed that he had lately become very melancholy, resorting to solitary places—avoiding his companions at school. The laundress reported his linen very much stained. I found that he had practiced masturbation for several years: that his parts had become so weakened, that the least friction would produce a seminal discharge; and at night it frequently passed

involuntarily. I also found a slight trace of pus in the discharge. His general health was impaired; his tongue was furred; his bowels habitually costive; his nervous system irritable; he had indulged in coffee and tobacco to excess; his appetite poor; his digestion imperfect; his natural developments were good; his head rather large for his lungs. I endeavored to portray his sad condition to him in high colors. Ordered him to take a mercurial cathartic, with three grs. of quinine. After this had operated, directed him to take a tablespoon full of the following mixture, morning and evening, in water and claret wine:

R. Ex. Sarsap., \bar{z} ss.
 Sesquiox. Ferri., \bar{z} i.
 Nux. Moscha., \bar{z} i.
 Syr. Zinzi., \bar{z} i.

To sponge the body in cold water once a day, to use cold-water enemas after every stool, and at night to introduce into the rectum the following prescription, allowing it to remain until morning:

R. Ex. Cincho.,
 Ex. Gentian,
 Pul. Moschi., a. a. grs. x.
 Tinc opii., gtts. xv.
 Pul. G. Camp., grs. v.
 Solu. G. Arabic, \bar{z} i.

I directed him to keep his bowels regular with pills of a. a. Comp. ex. Colocy. and castile soap. I applied a solution of nit. of silver, ten grs. to the ounce of water, to the neck of the bladder, every three or four days, by means of a little pump,

formed by placing on the end of the stiletto of a catheter a little cotton; required him to sleep in a hard bed; to tie his hands to the bed-post at night. By these means he was partially restored, but not entirely, until he went to the country, and pursued an active out-door employment, so as to be able to sleep soundly at night.

In these kind of cases it is often very difficult, owing to the circumstances of the patients, to get them to use the necessary hygienic remedies, but in bad cases it is hardly possible to relieve them without this aid.

In cases where the vesicula seminales is in a morbid condition, I find that no remedy is so effectual as the application of nit. of silver in solution. Much has been said and written against this practice, and many cases are detailed where injurious results have arisen from it; but the reason why it has proved injurious is, that it has been used without due regard to the condition of the patient, and in no case ought it to be used until the secretory and excretory organs are in healthful condition; and if the irritation arising from its use is at all troublesome, I find it easily removed by a copious drink of parsley-root tea, or an enema of cold water; and I have a few times in my life, where the pain was very great, after injecting it freely and strong into the bladder, found it necessary to use warm water injections into that cavity. Another reason that may have led to difficulty from the use of this substance is, that it has generally been recommended to be applied in substance, or in a powder, placed in a port caustic, and any one can easily imagine that a very troublesome eschar might be produced in that way. In persons who have suffered a long time, and where there is great nervous irritability, it is best to use bougie for several days, to allay irritation; then use a weak solution, and gradually increase the strength.

Cases similar to the following sometimes come under my care :

A man, about 30 years of age, who was engaged in the Florida war, suffered, while there, from a violent attack of dysentery. Since his recovery, he had never experienced sexual desire, and as he wished to marry, he applied to me for relief.

I found that his digestive apparatus was still somewhat impaired ; that he was subject to diarrhœa whenever he indulged in certain kinds of food. I ordered him country air and exercise, warm salt bath, a blue pill every four days, with simple diet, and as soon as his alimentary canal assumed its natural condition, I directed the following alterative tonic :

R. Ex. Sarsap., $\bar{\text{5}}$ ss.
Iodide Potas., $\bar{\text{3}}$ ss.
Sesquiox Ferri., $\bar{\text{3}}$ ss.
Syr. Simp., \mathbb{H} j.

A tablespoon full morning and evening, in water.

To use the tonic injection, heretofore mentioned, modified so as to suit the irritable state of his rectum, and to keep his bowels regular with rhubarb. I then applied the nit. of silver solution, and in the course of a few months he was restored. Was married, and had children.

The following case was lately under my care :

A boy, about 18, who had been several years very much confined, and sitting at a desk, on a high stool, complained of constant sensation of coldness in the external organs of generation, with contraction of the parts ; entire absence of venereal appetite. His general health was very good. There seemed to be no apparent cause for the symptoms ; he thought

it arose from sitting too long on a hard seat. I prescribed the following tonic :

R. Sesquiox. Ferri., ʒi.
Mix. Moscha., ʒij.
Sem. Card., ʒiij.
Vin. Bordeaux, ℥j.

A wine-glass full at each meal; to use a suppository of Camp., Musk, and Opium; to bathe his hips in warm water every night, and gave him ten drops of tinc. cantharides twice a-day: increasing the dose until it produced stranguary; then, to relieve the irritation, use freely the parsley-root tea; after a few days, to use it again. I directed him to go to the country, and work on a farm. After using the cantharides, he soon began to feel natural sensations, and finally recovered.

Great care is necessary in the administration of the cantharides. So soon as the least irritation at the neck of the bladder occurs, I commence with the emollient drinks; or if it does not subside rapidly, a brisk cathartic will soon give relief. I frequently combine nit. of potash with the drinks—they will give relief in a shorter time. I have generally used this remedy in cases where the disease seemed to be strictly local, without general derangement of the health. I have sometimes used this remedy where the seminal weakness was accompanied with a gleety discharge, with good effect. As an external remedy, applied to the perinæum, cantharides will often be found beneficial in obstinate and protracted gleet. This substance is the basis of all the quack remedies that are advertised for the cure of seminal diseases, and I have several times witnessed serious effects from its incautious use.

In cases where seminal weakness is produced by excessive vengry in young married persons, they, of course, must be

treated upon the same general principles that I have indicated; but generally abstinence will restore the parts to their original vigor.

We have had a very interesting case lately, of a young gentleman who contracted the habit of self-pollution at college. He was a hard student; graduated with high honors; contracted gonorrhœa soon after leaving college, of which he was imperfectly relieved. His habits have been very studious and sedentary. He was troubled with nocturnal emissions of a thin, glairy fluid from the urethra; there was a weakness in the loins and joints; great depression of spirits, with an affection of the eyes, resembling amaurosis.

I advised him to give up all sedentary pursuits—take active exercise in the country—to use alteratives and tonics; cold bathing to the body in the morning, with hot hip-bath at night. I applied the nit. of silver to the neck of the bladder frequently, and he has entirely recovered, after some twelve months' treatment.

We might detail a variety of cases, and the treatment adopted, but there are so many circumstances to be taken into consideration, that must necessarily modify the course to be pursued in the management of these diseases, that it is only necessary to consider the best method we can take to improve the general health, and then the local remedies may be resorted to with good hope for success. I have met with several cases of partial paralysis resulting from excessive venery. A gentleman, about 40 years of age, applied to me, who complained of loss of venereal desire, and absence of erections. He did not follow my advice, nor would he submit himself to treatment. In a few months, he complained of inability to empty his bladder; and again, in a few months, I observed he tottered in walking, and was obliged to use a cane. He got into the hands of quacks: was unwilling to pay

regular physicians, being excessively penurious. He lost the use of his limbs; all the symptoms became aggravated, and in five years he died. In another case, paralysis of the right hand followed the seminal weakness.

I have lately seen an article taken from the *Charleston Medical Journal*, in relation to the use of the plug in pertes seminales, which brings to my mind a case of hemorrhoids, that I treated partly by excision, and afterwards by the hemorrhoidal plug. This patient was also troubled with nocturnal emissions. After he had used the plug for some weeks, he was relieved from both these affections, and I think it very likely that the plug had a salutary effect upon the seminal discharge, although it did not occur to me at the time, and I shall hereafter test the value of the remedy.

THE END.



